

Pacific Seabird Group



BULLETIN

Volume 8 Number 1

Summer 1981

The Pacific Seabird Group was formed out of a need for better communication and stimulation among seabird researchers and the general public. The Group acts to coordinate research and to inform its membership about events relating to Pacific seabirds and their environment. Activities include involvement in seabird sanctuaries, field surveys, seabird/fisheries interactions, and other related statements are issued on conservation issues of critical concern. While the PSG's primary area of interest is the west coast of North America and adjacent areas of the Pacific, it is hoped that seabird enthusiasts in other parts of the world will join and participate in the PSG. Annual dues for membership in the PSG are \$5.00 and are payable to the Treasurer (address on back cover). Members receive the PSG Bulletin.

PACIFIC SEABIRD GROUP BULLETIN

The Pacific Seabird Group Bulletin is issued in the spring or summer and fall or winter of each year. It contains news of interest to PSG members. Regional reports include a listing of current research and information on seabird conservation. The PSG Bulletin does not act as an outlet for the results of scientific research, but welcomes articles on seabird conservation, seabird research activities or other topics that relate to the objectives of the PSG. Articles and all other materials should be submitted to the Editor. Back issues of the PSG Bulletin (starting with Spring 1974) are available from the Treasurer for \$2.50 each.

PERMANENT ADDRESS

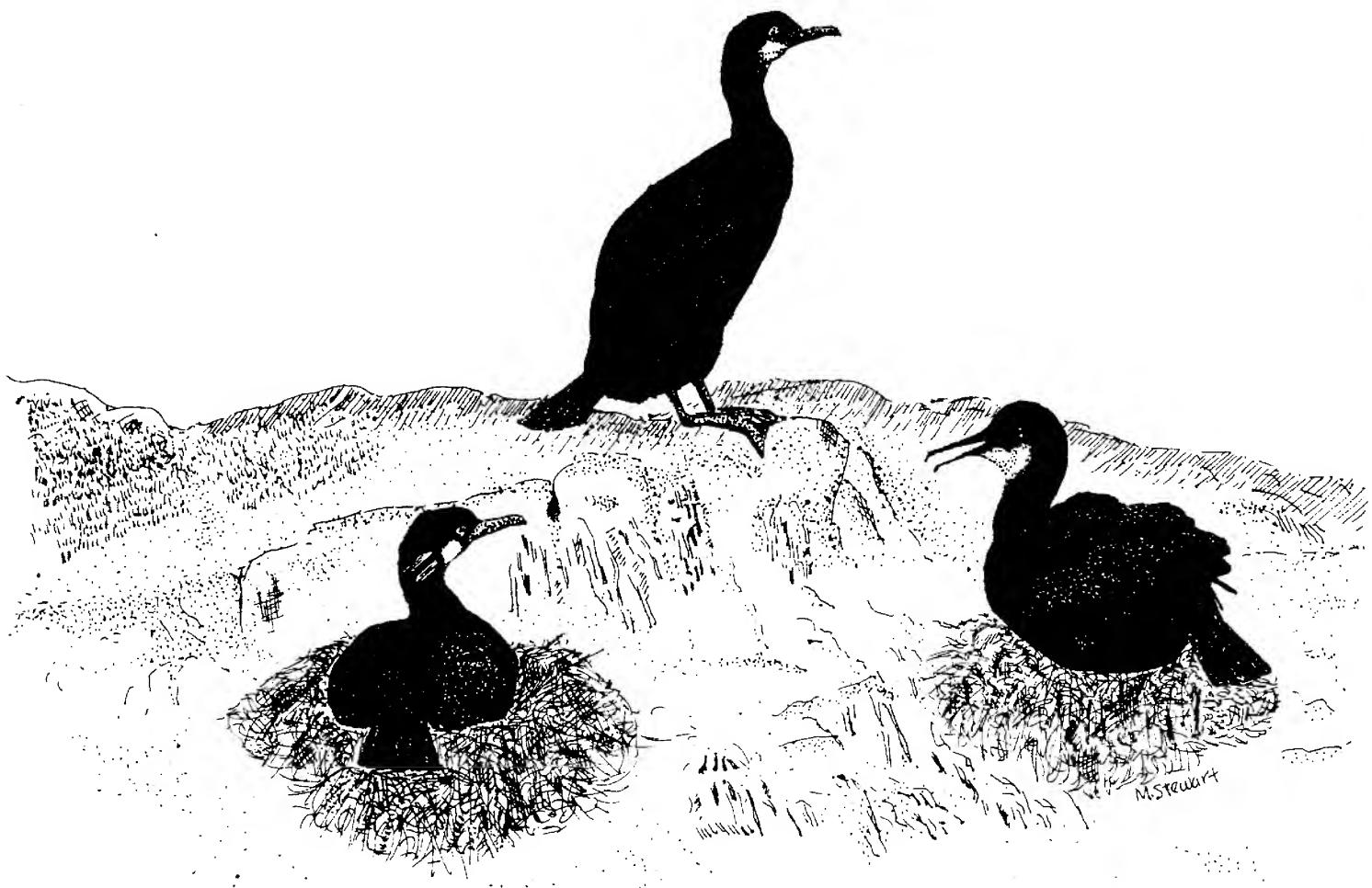
Pacific Seabird Group, c/o Point Reyes Bird Observatory, Box 321, Bolinas, California 94924

Note: This address is only for use of people who lose track of the current officers. Routine correspondence should be sent to the appropriate council member as listed on the back cover.

PACIFIC SEABIRD GROUP

BULLETIN

Volume 8	SUMMER 1981	NUMBER 1
The Editor's Page		3
The Chairman's Page		4
Pacific Seabird Group News		6
Regional Reports		12
Alaska		12
British Columbia		14
Hawaii		16
Washington		17
Oregon		19
Northern California		19
Southern California		21
Eastern North America		21
Gulf of California		24
Inland North America		24
Bylaws of the Pacific Seabird Group		25
Duties of Officeholders		30
Scientific Translations Committee		33
Translations Bibliography		35
Field Report		50
COPRDM Evaluation Panel Report		52
New Publications		60
Bulletin Board		61
New Members		62



Brandt's Cormorant

THE EDITOR'S PAGE

During the Executive Council meeting last November the goals and focus of the PSG were discussed. There was concern that the emphasis of the group was drifting away from its original goals, that its activities and influence in conservation areas were unsatisfactory, and that it was becoming just another small esoteric scientific organization.

I have read through all of the past issues of the Bulletin to see if I could determine what PSG does. I thought perhaps that an examination of PSG Committees would be a fruitful way to do this. My impression is that PSG is paving the road to Hell. Committees on colony censusing, beached bird surveys and disasters, pelagic observations, and species accounts have all fizzled out. A Conservation Committee was abolished soon after its founding. Suggestions that it be revived and that a Legislative Matters Committee be established have never been carried through. The Human Disturbances to Seabirds and the Coastal Surveys Committees are still thought to exist, but there is no evidence in the Bulletin that they have ever done anything. The Seabird Sanctuaries and the Seabird/Fisheries Interactions Committees have produced policy statements and reports, but now what? Only the Election and Foreign Translations Committees are demonstrably active.

Past issues contain many references to group activities and coordination of large projects, but the history of the PSG is largely the history of individual efforts. It is interesting that the names of the doers in PSG appear in the Bulletin for a few years and then disappear. I doubt that they drop to the sidelines because all is well in the world.

It would be healthy for the group if all members would read the description of the Group on the inside of the front cover and ask themselves whether it describes the Group as they know it and the kind of organization they want the PSG to be. The discussion started in Tucson needs to be continued. I hope you will participate, either in Seattle or in the Bulletin.

Art Sowls, Tony DeGange, Mark Rauzon, Linda Parkinson, and Margaret Stewart generously supplied the drawings in this and the last previous issue. Esther Goodyear had typed the last three issues and Betsy Strauch has struggled to make the text conform to the English language and proofread most copy. Marina Ossipov drew the membership map. I am grateful for their help.

The next issue of the Bulletin will not appear until after the January meeting.

THE CHAIRMAN'S PAGE

Pacific Seabird Group members have some exciting events to look forward to in 1982. PSG plans to hold its next annual meeting 6-8 January in Seattle and the following one 1-3 December in Honolulu. The first meeting will feature a symposium on the feeding ecology of seabirds, with sections on interactions between commercial fisheries and marine birds, the feeding ecology of pelagic birds and the feeding ecology of marine waterfowl. The second meeting will probably include a symposium and will be held in conjunction with the Australasian Seabird Group. Suggested themes for the Honolulu meeting have been thus far: ecology of tropical seabirds, conservation of seabirds in Pacific ecosystems, and human disturbance and predation of Pacific seabirds. Whatever theme Australasian and Pacific Seabird Group members choose, it should be a broad one to ensure the participation and interests of as many members as possible. Ideally, it should involve a problem or subject common to all Pacific latitudes.

Harry Ohlendorf has made excellent progress with the Seattle program, & Craig Harrison is doing an equally fine job in making arrangements for the one in Honolulu. Gerry Sanger and David Nettleship, editors for the symposium on feeding ecology, are energetically pursuing arrangements to publish the proceedings at the least cost to PSG. Many other dedicated PSG members are now involved to make the meetings a success, and I am proud of their performance.

PSG is broadening its horizons with the agreement for a joint meeting in Honolulu. We should not stop our momentum at this stage. As 1983 is not very far away, PSG could take the initiative to have a joint meeting with seabird groups in Great Britain and South Africa at some convenient place, perhaps Florida. The Colonial Waterbird Group may also join. After that PSG members may elect for their Asilomar resthome in 1984, or if our energy keeps up (and I do not foresee a problem, as our present organization provides a continuous and renewable resource of new executive members), we can go northward to Alaska to take up Joe Strauch's challenge to have a symposium on Alaska marine bird research (see Editor's Page, PSG Bulletin Vol. 7(2), Winter 1980).

PSG is dynamic on other issues as well. We have a revised set of bylaws printed in this Bulletin. Paul Springer has been the hardworking member on this topic.

I would like to request that PSG members make an extra effort this year to bring in new members. Quantitative membership, however, is not the only criterion for PSG's existence. Attendance was low during the Tucson meeting, but it was a most enjoyable and relaxed come-together. Something is to be said for a meeting with less than maximal attendance provided it is well organized (which it was by Palmer Sekora and Doug Siegel-Causey and their assistants). Diversity and quality of members are therefore as important as or more important than numbers and contribute to the strength and innovation of our organization. If a potential member has such qualities, strive to have that person join us so that PSG and the new member will mutually benefit from their affiliation.

Kees Vermeer
Sidney, British Columbia



Red-footed Booby

The ninth annual meeting of the PSG will be at the Hawaiian Regent, Honolulu, Hawaii, 1-3 December 1982. The Australasian Seabird Group has expressed interest in having a joint meeting then. Tropical seabirds, human disturbance and predation of Pacific seabirds, and conservation of seabirds in Pacific island ecosystems have been suggested as symposia themes.

Ninth Annual Meeting

There will also be an opportunity for presentation of general papers at the meeting, and a call for papers will be issued separately for those. See the Bulletin 7 (2):47 for additional information concerning the meeting. PSG Bulletin 7 (2):47 for additional information concerning the meeting.

Proceedings of these sessions probably will be published. The programs for symposia are now nearly complete. Anyone who would like to contribute a paper should contact the appropriate session chairman immediately.

III. Seabird-commercial fisheries interactions: Session Chairmen Dave Sanger (U.S. Fish and Wildlife Service, 1011 E. Tudor Road, Anchorage, AK 99503; telephone 907-276-3800) and Dave Ainley.

III. Feeding ecology of pelagic marine birds: Session Chairmen Gerry Spiringer (Wildlife Research Field Station, Humboldt State University, Arcata, CA 95521; telephone 707-826-4759) and Jim King.

II. Feeding ecology of pelagic marine birds: Session Chairmen Paul January 1982. A portion of the program will be devoted to symposium sessions on selected topics concerning the ecology of seabirds. These include:

I. Feeding ecology of marine waterfowl: Session Chairmen Paul January 1982. A portion of the program will be held in Seattle, Washington, 6-8 January 1982. A portion of the program will be devoted to symposium sessions on selected topics concerning the ecology of seabirds. These include:

Eighth Annual Meeting

Information on reservations, suggestions for ways to save on air travel, information on field trips, and a call for papers will be sent to members soon after the January meeting. Anyone with information or suggestions which will help in planning and suggestions for topics of paper sessions should send them directly to Craig Harrison, U.S. Fish and Wildlife Service, P.O. Box 50167, Honolulu, HI 96850.

Last Call for Representative Nominations for 1982

The Election Committee has not received any nominations for 1982 representatives. The bylaws state that such nominations are to be received by the Coordinator of the Election Committee by 1 June. In the case that vacancies are not filled by election or nomination, the Executive Council can appoint representatives. The Executive Council feels it would be unhealthy for the Group if it were to appoint all of the six vacancies for 1982. Thus, the membership is notified that the call for nominations has been extended to 15 September (or to three weeks after the end of the Canadian postal strike).

Although nominations for officers are made only by the representatives, they welcome suggestions for nominations from the membership.

A separate sheet is provided to send nominations and suggestions directly to Spencer Sealy. Please do not send it until the Canadian postal strike is over.

Problems in Bulletin Mailings.

The Winter 1980 issue was mailed on 6 March. Most members in the continental United States received their copies in about a week, those in Alaska and Hawaii received theirs a week or more later, while those in Canada received theirs in early April. In isolated cases some members received copies much later than these averages. Because of the due date of 1 April for the bylaws ballot, many members were annoyed at getting their Bulletins in April. Some members ignored the due date and sent their ballots anyway. All received were counted. Apologies are extended to those who thought they couldn't vote because they got their issues late. In the future, due dates will better reflect the uncertainties in production, printing, and mailing of

the Bulletin. This issue will probably be mailed in late July. Members who receive it after 4 September should notify the Editor. At the January meeting, the Executive Council will consider alternative methods of getting issues to all members in a timely fashion.

Too many members are lax in notifying the Treasurer of address changes. It costs 26 times as much to get the Bulletin to a member who did not notify the Treasurer of an address change as to one who did. If you move around a lot, please consider having the Bulletin sent to an address which is more permanent than your next field site.

Proposed Minutes of the Pacific Seabird Group Executive Council Business Meeting, 19 November 1980

1. The annual business meeting of the Executive Council of the Pacific Seabird Group was held on Wednesday, 19 November 1980, at the Student Union Building on the University of Arizona campus, Tucson, Arizona. Chairman Schreiber called the meeting to order at 1000 hours. Secretary Springer was absent; therefore, incoming Secretary Hand took the minutes.
2. A MOTION to waive the reading of the minutes of the 1979 Business Meeting was PASSED.
3. Treasurer B. A. Schreiber was absent. Chairman R. Schreiber presented the Treasurer's Report.
4. Outgoing Chairman Schreiber led discussions concerning
 - a) the focus and goals of the PSG and of annual meetings in the near future as these relate to changing political and economic conditions in the country and to the growth of the PSG, and
 - b) whether or not resolutions adopted by the PSG are effective, and how they can best be used.
5. Election Committee Coordinator Leschner read the names of the newly elected officers and regional representatives of the Executive Council.

6. Outgoing Chairman Schreiber relinquished the chair to incoming Chairman Vermeer.
7. A number of ideas that might provide focus and impetus for future PSG meetings were discussed. These included additional symposia, like the Shorebird Symposium, that would be published when possible; membership drives in the areas where meetings are being held; and a strong emphasis on whatever conservation issues are particularly associated with the locality where a meeting is being held.
8. After discussion of pros and cons of possible meeting times and locations, Schreiber made the following motion:

MOTION: That the Pacific Seabird Group's next meeting be in Seattle, Washington, between the 5th and 24th of January 1982. That the meeting following the one in Seattle be in Hawaii (Oahu), between the 2nd and 19th of December 1982.

There were two addenda to the motion:

- 1) That L. Leschner be the Coordinator of Local Committee in Seattle and C. Harrison be the Coordinator of Local Committee in Hawaii.
- 2) That, if the meeting cannot be held in Seattle for any reason, Vancouver, B.C. be the alternative site for the meeting in January of 1982.

PASSED. Chairman Vermeer will be informed by Leschner by 15 February 1981 whether the commitment for a meeting location in Seattle in 1982 is definite.

9. Possible symposium topics for both the Seattle and Hawaii meetings were discussed.
 - a) There was some agreement that the appropriate subject for the Hawaii meeting would concern tropical seabirds, perhaps looking specifically at Pacific Ocean studies. Efforts will be made to contact and encourage the attendance of Australasian members of the

PSG. Schreiber suggested several possible non-PSG sources of funding for publication of these proceedings. Nettleship suggested that a committee be formed to decide the contents of the Hawaii symposium. No further action was taken on this subject.

- b) The following topics were offered as suggestions for symposia at the Seattle, Washington meeting:

Vermeer: Feeding ecology of seabirds

Leschner: (Minisession) Present and proposed methods for stimulating public awareness of seabird conservation problems

Gould: Methods of censusing

Incoming Vice-chairman Ohlendorf was designated by Chairman Vermeer as Program Committee Chairman of the Seattle Meeting; Ohlendorf will work with the Executive Committee and Coordinator Leschner to establish the scientific program, possibly including a symposium.

Schreiber reported that, if it is desired, funding for publication of this symposium is available from PSG funds.

10. Strauch asked whether the PSG should establish a systematic policy for determining meeting locations. Schreiber recommended that, at a minimum, some thought be given to possible locations at least three years in advance. A joint meeting with the Colonial Waterbird Group was discussed, possibly to take place three years hence. No further action on this question was taken.
11. Translations Committee Chairman Siegel-Causey reported on the status of translations that are now or will be available to PSG members. He requested that members willing to do some translating contact him.
12. Sanctuary Committee Chairman Sekora reported on the status of that committee's efforts to elicit responses and information from PSG members about sensitive habitats and colonies. The response to date has been virtually nil.

13. To accommodate lunch and the afternoon paper session, the meeting was adjourned at 1200 hours; it was reconvened in the Student Union Building by Chairman Vermeer at 1620 hours.
14. Chairman Vermeer reviewed the meeting locations for the January and December 1982 PSG meetings that were selected in the morning Executive Council session.
15. The question of changing the bylaws with respect to the tenure of officers was discussed. Chairman Vermeer reviewed the need for and possible options that might be adopted in order to provide more continuity on the office of Chairman. Schreiber moved that we publish the proposed bylaws changes in the next bulletin, including a description of the implications of the changes. Included in the bulletin will be a ballot for the membership to vote on the proposed changes. The MOTION was PASSED.
16. Secretary Hand announced that nominations for Regional and Nonregional Representatives to the Executive Board for 1982 are open. A further call for nominations and a list of the regional board seats available in 1982 will be published in the next bulletin.
17. The meeting was adjourned at 1945.

Respectfully submitted,

Judith Latta Hand, Secretary

REGIONAL REPORTS

ALASKA, MARGARET R. PETERSEN

Coastal and pelagic surveys

Winter surveys of Bald Eagles (J. Hodges, USFWS, Juneau) and waterfowl (J. King, USFWS, Juneau) continued in southeastern Alaska. This spring L. D. Krasnow (USFWS, Anchorage) completed the fieldwork on her study of potential effects of a hydrologic project on waterfowl and shorebirds in Kachemak Bay. G. Hunt and others (University of California, Irvine), in cooperation with PROBES studies, are continuing studies of the pelagic distribution of seabirds in the southeastern Bering Sea. D. Forsell, P. Baird, and others (USFWS, Anchorage) are continuing surveys of seabird colonies in the eastern Aleutian Islands again this summer. D. Nysewander, A. Sowls, J. Trapp, and others (USFWS, Anchorage) are initiating surveys of seabird colonies in the outer portion of southeastern Alaska this summer. E. West and others (USFWS, Anchorage) are surveying foxes and seabird colonies in the western Aleutians (Adak Island and vicinity). R. H. Stratton and others (USFWS, Kodiak) are continuing surveys of marine birds around Kodiak Island this summer. E. Bailey (USFWS, Anchorage) is continuing breeding bird surveys along the south side of the Alaska Peninsula.

Colony studies

D. Boersma's (University of Washington, Seattle) studies on the breeding biology and ecology of Fork-tailed Storm-Petrels are continuing in the Barren Islands. A. DeGange (USFWS, Anchorage) will accompany the field crews to the Barren and Aleutian Islands to assess and develop plans for more seabird colony studies. S. and M. Hatch (USFWS, Anchorage) are in the Semidi Islands continuing studies on the breeding biology of Northern Fulmars and monitoring productivity of several species of seabirds. C. Adamson (California State University, Humboldt) continues to observe breeding Mew Gulls in Anchorage. K. Kulitz (University of California, Irvine) is continuing work on the breeding biology of Pigeon Guillemots at Naked Island, Prince William Sound. P. Baird (USFWS, Anchorage) is initiating studies at Middleton Island and the

Semidi Islands to evaluate colony census techniques and productivity of Black-legged Kittiwakes and Tufted Puffins using a mathematical model designed to predict population numbers and productivity. D. Roby (University of Pennsylvania, Leidy Lab.) will begin a study on Least Auklets on the Pribilof Islands. P. McRoy and others (University of Alaska) will initiate studies on feeding and reproductive parameters of murres and kittiwakes breeding at St. George Island and Cape Pierce.

Estuarine studies

R. E. Gill and C. M. Handel (USFWS, Anchorage) are continuing their study of the breeding biology of Black Turnstones on the Yukon-Kuskokwim Delta at the Totakoke River. T. C. Rothe (USFWS, Anchorage) and J. C. Franson (USFWS, Patuxent) are continuing studies of the distribution and abundance of migratory birds and of background levels of heavy metals in migratory birds, fish, and invertebrates in fjordlands adjacent to the proposed molybdenum mine at Boca de Quadra in southeastern Alaska.

Final reports and publications

An annotated bibliography of literature on Alaska water birds. 1980. Final OCSEAP Report by C. M. Handel, M. R. Petersen, R. E. Gill, Jr., and C. J. Lensink. Biological Services Publication, available in 1981.

Beaufort Sea barrier island - lagoon ecological process studies: Final report, Simpson Lagoon. 1980. Final OCSEAP Report by LGL Research Associates. Copies available from NOAA/OMPA Alaska Office, Box 1808, Juneau, AK 99802.

Identification, documentation, and delineation of coastal migratory bird habitat. 1980. Final OCSEAP Report by P. D. Arneson. Copies available from NOAA/OMPA Alaska Office. Box 1808, Juneau, AK 99802.

Reproductive ecology, foods and foraging areas of seabirds nesting on the Pribilof Islands. 1975-1979. 1980. Final OCSEAP Report by G. L. Hunt, Jr., Z. Eppley, B. Burgeson, and R. Squibb. Copies available from NOAA/OMPA Alaska Office, Box 1808, Juneau, AK 99802.

Distribution and abundance of marine birds and mammals wintering in the Kodiak area of Alaska. 1981. Final OCSEAP Report by D. J. Forsell and P. J. Gould. Biological Services Publication, available in 1981.

The winter feeding ecology and trophic relationships of marine birds in Kachemak Bay, Alaska. 1981. Final OCSEAP Report by G. A. Sanger and R. D. Jones, Jr. Copies available from NOAA/OMPA Alaska Office, Box 1808, Juneau, AK 99802.

BRITISH COLUMBIA, IAN ROBERTSON

Canadian Wildlife Service, Delta, B.C.

The bulk of the seabird work on the B.C. Coast is presently conducted by the Canadian Wildlife Service. Kees Vermeer is working on the nesting and feeding requirements of plankton-feeding Ancient Murrelet and Cassin's Auks. Jean Pierre Savard is studying the behavior and chronology of molting scoters and Harlequin Ducks in Boundary Bay, south of Vancouver. Rick McKelvey will be surveying seabirds in the Queen Charlotte Sound-Hecate Strait area, where offshore drilling for oil may occur. Rick has recently completed "Some aspects of the winter feeding ecology of Trumpeter Swans at Port Alberni and Comox Harbour, British Columbia" (M.Sc. Thesis, Simon Fraser University, March 1981). He will also be exploring the potential for using fisheries patrol aircraft for surveying seabirds. Gary Kaiser is continuing his studies of shorebirds in the Fraser Delta and selected areas of B.C.'s north coast.

Provincial Museum, Victoria

A major ongoing program has been the censusing of seabird colonies. This program, under Wayne Campbell's direction, has produced seabird colony maps for Vancouver Island (1976) and the Queen Charlotte Islands (1979). This year the seabird colonies in the Strait of Georgia will be surveyed. A further program is a study of Black Oystercatchers on Cleland Island.

B.C. Ministry of Environment

Approximately 10 years ago, the B.C. Fish and Wildlife Branch began surveying B.C. shorelines for wintering aquatic birds. Though these surveys have not been conducted every winter, the program has compiled information on most parts of the B.C. coast, with many years' surveys for the shorelines of

Vancouver Island and the Queen Charlotte Islands. Emphasis has been on estuary utilization by waterfowl. Under the direction of Rick Davies (Fish and Wildlife Branch) and Roger Hunter (Terrestrial Studies Branch), the seasonal focus of these studies has been expanded to include spring and autumn periods. The Fish and Wildlife Branch collaborated with the Alaska Fish and Game on a survey of breeding Bald Eagles along the coast (1980). A survey of breeding Peregrine Falcons made at the same time indicated a 36 percent increase (Bill Munro, Fish and Wildlife Branch). Results of this and other Peregrine Falcon surveys will appear in a forthcoming issue of the Canadian Field-Naturalist.

University of British Columbia

Two graduate student projects are presently underway. Joan Eamer is studying factors influencing winter feeding ecology of Mallard and American Wigeon along the eastern coast of Vancouver Island. Anne Vallée is studying nesting density, cleptoparasitism by gulls, and breeding success in Tufted Puffins.

University of Manitoba

Harry Carter is continuing his studies of the post-nesting biology of Common Murres. Julie Porter has completed her master's thesis: The dynamics of seabird multispecies flocks in Barkley Sound, British Columbia.

Private Consultants

LGL Ltd (Sidney, B.C.) have recently published a review of the information available on B.C. seabirds as part of an environmental assessment for Trans Mountain Pipe Lines Ltd. It is the most comprehensive one available. D. A. Blood and Associates (Lantzville, B.C.) recently (1980-81) surveyed seabirds in the Prince Rupert area, southern Queen Charlotte Islands, and, prior to 1980, collected winter aquatic bird data on several Vancouver Island estuaries. Beak Consultants Limited (Richmond, B.C.) recently censused wintering birds at Port Simpson Harbour.

HAWAII, CRAIG HARRISON

University of California, Los Angeles

Beth Flint is on Tern Island studying time-energy budgets and breeding biology of Sooty Terns. She is using doubly-labeled water to try to determine energy metabolism estimates for free-flying birds. She will collaborate with Craig Harrison on telemetry of these birds.

University of Hawaii

T. Petit is working with G. C. Whittow on seabird energetics using bomb calorimetry of seabird food items and bird eggs. G. Grant was on Midway from November to May as a post-doc working on egg physiology. Grant has reported a second (albeit immature) Short-tailed Albatross visiting Midway this year, so the possibility of a breeding pair becoming established increases. Grant is also studying the reproductive biology of the Bonin petrel and Black-footed Albatross.

U.S. Fish and Wildlife Service

A. Newman will be on Nihoa Island and M. Naughton on Laysan this summer to study the reproductive biology of several species as well as to attempt to define criteria by which the health of northwestern Hawaiian Islands seabird colonies can be judged. M. Rauzon spent five weeks on Nihoa in winter and learned great deal about the breeding of the Blue-gray Noddy and Sooty Storm-Petrel. E. Sheekey is a volunteer on Tern Island, helping to collect breeding biology data during the peak of the field season.

A. Newman and M. Naughton are analyzing results from two years of field camps on Laysan Island. They expect to publish current population estimates, feeding frequencies, the first breeding biology study in the Pacific of Bulwer's Petrel, and the first breeding biology study anywhere of the Christmas Shearwater. C. Harrison and H. Ohlendorf have collaborated on a study of chlorinated hydrocarbons in Sooty Tern, Wedge-tailed Shearwater, and Red-footed booby eggs collected from throughout the Hawaiian Archipelago.

B. Schulmeister, J. Gravning, and J. Andre continue to monitor seabird populations on Tern Island, French Frigate Shoals, throughout the year.

Kiribati (Gilbert Islands)

Katino Teebaki will visit Tern Island, French Frigate Shoals, to learn techniques of seabird research and management. On his return to Christmas Island he will become the Chief Conservation Officer.

University of the South Pacific, Fiji

Dr. Nigel Langham is studying the breeding season and success of Red-footed Boobies near Viti Levu. Additionally, he hopes to collaborate with Fergus Clunie, Director of the Fiji Museum, on a survey of the seabird colonies in Fiji waters.

WASHINGTON, P. DEE BOERSMA

University of Washington

Wildlife Sciences Group, College of Forest Resources

1. Northern Puget Sound marine bird survey, Steve Speich, Terence Wahl, and Dave Manuwal
2. Winter feeding habits of scoters, Katie Hirsch (completed)
3. Murre distribution as related to prey availability in the Bering Sea, Doug Woodby (completed)
4. Biology of the Dark-rumped Petrel in Hawaii, Ted Simons
5. Clutch size in arctic shorebirds, Sue Hills
6. Internal parasites in seabirds, Eric Holberg

Institute for Environmental Studies

1. The role of environmental variability and species interactions on reproductive patterns of Leach's and Fork-tailed Storm-Petrels on Tatoosh Is., Washington, P. Dee Boersma

2. The effect of resource productivity on the interspecific variation in reproductive behavior of the American Coot, Wendy Hill
3. Marine birds of the Barren Islands, P. Dee Boersma, Emily Davies, and Walter Reid
4. Sanderling foraging at ocean shores, David McDonald

Department of Zoology

1. Sex role and monogamy in shorebirds, Jim Erckmann
2. Flocking and foraging patterns in wintering shorebirds, Chris Stinson
3. Maintenance of prey polymorphism, Chris Stinson

U.S. Fish and Wildlife Service

1. The Rhinoceros Auklet as an indicator species, Ulrich Wilson
2. Remote census of Common Murres, cormorants, and marine mammal haul out area, Ulrich Wilson

Washington State Department of Game

1. Marine bird survey of southern Puget Sound, Lora Leschner and Eric Cummins
2. The banding of Caspian Terns, gulls, and shorebirds in Grays Harbor Estuary, Jack Smith and Eric Cummins
3. Management plan for Protection Island, Katie Hirsch (completed)
4. Radio tracking of Rhinoceros Auklets, Lora Leschner

Evergreen State College

1. Grays Harbor, a major wintering area for shorebirds, is threatened by expansion of port facilities. Steve Herman and his students have been studying the area.

Battelle Northwest Laboratories

1. Long-term ecological monitoring of energy-related pollutants in marine food chains, Richard Fitzer
2. Impact of the Haul Road on shorebird communities in Alaska, Lester Erbherdt and Wayne C. Hanson
3. Ecological assessment of wildlife populations (including seabirds) on the Hanford Site, Richard Fitzer

University of California, Irvine

1. Homosexuality in Ring-billed and California Gulls in Eastern Washington, Mike Conover

Seattle Aquarium

1. Food utilization and growth of captive Rhinoceros Auklets, Tufted Puffins, and Pigeon Guillemots, Gary Ballew, and John Nightengale
2. Molting of Rhinoceros Auklet, Gary Ballew -

Protection Island

Anyone interested in adopting a seabird on Protection Island may write: Eleanor Stopps, Route 1, Box 525 B, Port Ludlow, WA 98365. Money collected will be used to buy land to save the wildlife.

OREGON, MARK A. STRONG

Because of recent reductions in funding, there is no seabird field research in Oregon this year.

NORTHERN CALIFORNIA, BOB BOEKELHEIDE

Lease sales on the four northern basins (Santa Cruz, Bodega, Point Arena, and Eel) await decisions sometime this summer by Secretary of the Interior James Watt. These basins are used annually by hundreds of thousands

of seabirds, including murres, loons, grebes, and scoters, which are particularly vulnerable to oil spills. A primary question appears to be, what risks we are willing to take to recover limited quantities of oil and gas?

Some good news: a Federal marine sanctuary encompassing the Marin coastline and the Farallon Islands was established by the Department of Commerce in January 1981. Yet to be worked out, however, is the prohibition of oil and gas development in the sanctuary.

Mono Lake water levels continue to drop, as Los Angeles continues diverting water from the lake's main tributary. During the 1980 breeding season, California Gulls moved away from their former major breeding site at the lake, Negit Island, which is now attached to the lake shore by a land bridge. The gulls' breeding efforts are now concentrated on smaller islands farther offshore, but these are doomed if water levels continue to drop. Mono Lake still needs our support--a moratorium on water diversions is necessary until decisions are made to protect the lake. Write Los Angeles, California, and federal representatives and public officials. For more information, write Mono Lake Committee, P.O. Box 2764, Oakland, CA 94602.

The Ocean

The 1980 breeding season for marine birds in northern California was decidedly poorer than 1979, beginning late and ending early. Upwelling associated with strong northwesterly winds was delayed near the Farallon Islands, causing a delay in the initiation of the ocean's production cycle. It seemed to be a fair to poor year for prey species near the islands, leading to little success for inshore feeders such as Pelagic Cormorants and Pigeon Guillemots, and only moderate success for species able to feed farther offshore.

The 1981 season has also been late, although by late May sizable concentrations of juvenile rockfish, a favorite prey of island birds, were appearing near the Farallones. The commercial salmon fleet is also finding greater concentrations of fish than 1980, suggesting that prey species are more available this year than last.

SOUTHERN CALIFORNIA, JOHN C. OGDEN

Long Beach, California

Work continues on the long-term study of the California Least Tern. Barbara Massey and Jon Atwood are studying the foraging ecology and the life histories of known-age banded terns. Jon and Charlie Collins are completing their third year of growth studies of different colonies of these terns. Dennis Minsky and Pam Gunther are starting their thesis research on other aspects of tern biology.

Barbara Massey and Dick Zembel are continuing their studies of the Light-footed Clapper Rail, particularly in Anaheim and Upper Newport Bays. They are color-banding and expect to start telemetry soon.

Stu Warter continues his studies of the fossil anseriform bird Chendytes in southern California.

EASTERN NORTH AMERICA, W. H. DRURY AND J. L. HAND

Eastern Canada

The field season for eastern Canadian Wildlife Service biologists had evidently started when I sent a request for information to Nettleship and Brown. According to their 1980 report (PSG Bull. 7, #1), they are continuing the study of Thick-billed Murres in Digges Sound/Hudson's Strait and continuing the fine-grained charting of the distributions of marine birds in relation to fronts and the distribution of plankton as well as the marine productivity and major seabird cities in Baffin Bay. Other eastern Canadian studies include those of Cabot Strait and nesting studies on Machias Seal Island.

Undergraduate studies on Kent Island include a study of behavior of Black Guillemots by K. Jones, while G. Divoky, J. Feely, and D. Folger work on Black Guillemots at another end of their range: Cooper's Island east of Point Barrow, Alaska. The Kent Island population has been studied on and off for several decades, while the Cooper's Island population has been color-banded by George during the last half dozen years.

Northeastern U.S.

W. Drury and sons will survey islands on the Maine coast to record the continuing growth of the Herring Gull and Great Black-backed Gull populations. These species (which are benefiting from recent improvements in fishing gear and the establishment of new fish factories) are continuing their displacement of Laughing Gulls and Common, Arctic, and Roseate Terns. Unfortunately, the continued growth of the gull populations favors the increase of the local Common Eider population, and eiders are an important commodity for the local fish and game department. Suggestions for management have so far been vetoed.

Manomet workers, coordinated by Kevin Powers, are examining the distributions of marine birds in relation to oceanic fronts off the coast of the northeastern U.S. They are studying the distributions of Red Phalaropes and Wilson's Petrels and that of their prey, based on the neuston samples gathered by NMFS. They have also begun to measure quantitatively the distribution of marine birds, cetaceans, and turtles on the continental shelf from Cape Hatteras to Nova Scotia, using data gathered on "ships-of-opportunity."

National Audubon Society workers, coordinated by Steve Kress, continue to monitor the behavior of Atlantic Puffins transplanted as nestlings from Witless Bay, Newfoundland, to Muscongus Bay, Maine. They are also studying inter-island movements of Leach's Petrels.

Observers on the sailing R. V. Westward, coordinated by Tim Rumage, will record seasonal changes in distribution of seabirds, especially the differences at sea between subadults and adults.

Michael Conover is studying the transfer of information concerning predators among adult Great Black-backed and Herring Gulls.

Several long-term projects are continuing:

- a) Helen Hayes and many others: terns on Great Gull Island;
- b) Paul and Francine Buckley: monitoring tern and Laughing Gull populations on Long Island;

- c) Michael Gochfeld: breeding biology of Black Skimmer; distribution of heavy metals in Raritan Bay, New Jersey; and
- d) Joanna Burger and Michael Gochfeld: behavior of Common Tern and Black Skimmer.

Great Lakes

William Scharf and G. Shugart are studying Common Terns, Double-crested Cormorants, and Forster's Terns in the U.S. Great Lakes.

Canadian Wildlife Service programs include:

- a) H. Blockpoel's monitoring populations of Ring-billed Gulls and Common Terns in Ontario;
- b) Glen Fox's study of congenital anomalies in gulls and terns;
- c) D. Weseloh, D. Hallett, and P. Mineau's monitoring contaminants in fish-eating waterbirds, primarily Herring Gulls, Common Terns, Caspian Terns, and Double-crested Cormorants, on the Great Lakes.

Middle, South Atlantic, and Gulf Coasts

M. Erwin and D. Smith are surveying heronries from New Jersey to the Carolina Banks and studying breeding success in Common Terns. Alice Allen-Grimes is studying the breeding biology of White Ibis in North Carolina. J. Weske, J. Buckalew, and others are banding Royal Terns, Sandwich Terns, Black Skimmers, and other marsh-nesting waterbirds in Maryland, Virginia, and North Carolina. B. Williams is surveying nesting gulls and terns on the Virginia Barrier Islands. L. Hammer and Steve Patton are studying Laughing Gulls in south Florida.

Considerable work is being done on Brown Pelicans:

- a) J. Parnell is monitoring the breeding of pelicans in North Carolina;
- b) Vivian Mendenhall is continuing the work of L. J. Blus in monitoring breeding populations and organochloride residues in eggs in South Carolina;

- c) Steve Nesbitt is conducting aerial censuses of pelicans and other Florida coastal waterbirds, working in cooperation with the Louisiana Pelican Transplant Program, and studying pelican diets and effects of pollutants;
- d) Larry McNease is working on restocking Louisiana pelican colonies and monitoring their success; and
- e) Jaime Collazo is studying the population dynamics, behavior, and effects of disturbance on a pelican population in Puerto Rico.

GULF OF CALIFORNIA, DOUG SIEGEL-CAUSEY

The University of Arizona seabird group (Doug Siegel-Causey, Mathew Leibold, James Silliman) have begun censusing the seabird colonies of the Northern Gulf of California. We visited Islas San Jorge and Rocas Consag and expect to return later this summer. The breeding population of Brown Boobies seems larger than earlier reported, but Heermann's Gulls were found breeding in much smaller numbers than expected.

Double-crested Cormorants continue to attempt to breed in trees along the Gila River near Gila Bend, Arizona, and near San Luis, R.C., Sonora, on the Colorado River. There are about 25 pair at each location, but only a few nests persist throughout the summer.

INLAND NORTH AMERICA, SPENCER G. SEALY

Spencer Sealy and Harry Carter continue to study the inland occurrence of alcid species.

BYLAWS OF THE PACIFIC SEABIRD GROUP

All of the proposed bylaw changes were approved by the 22 members who submitted ballots. The complete bylaws, incorporating the changes, are printed below.

ARTICLE I. NAME, OBJECTIVES, AND COMPOSITION

Section 1. Name. The name of this organization shall be the Pacific Seabird Group.

Section 2. Objectives. The objectives of the Group are exclusively scientific, educational, and nonprofit. In furtherance of these objectives, the Group's principal activities will be (1) to increase the amount and quality of scientific research on Pacific seabirds, (2) to educate the Group's members and the general public of the importance of Pacific seabirds and their environment, and (3) to disseminate publications and other information to accomplish this end.

Section 3. Composition. The Pacific Seabird Group shall be composed of those persons, regardless of sex, race, religion or nationality, interested in Pacific seabirds and their environment.

ARTICLE II. MEMBERSHIP

Section 1. Membership Status. Membership in the Group shall be open to all persons interested in Pacific seabirds.

Section 2. Dues. Annual dues shall be approved by a majority vote of the Executive Council as needed to meet the financial requirements of the Group, and payable in advance by 1 January of each year.

ARTICLE III. ORGANIZATION

Section 1. The Pacific Seabird Group. The Group is governed by a board of directors called the Executive Council.

Section 2. The Executive Council.

Clause A. Composition. The number of members on the Executive Council will be variable. The Executive Council is composed of all group officers, the

Pacific Seabird Group Bulletin Editor, and one regional representative from each of the following regions: Alaska, British Columbia, Washington, Oregon, northern California (north of Point Conception), southern California (south of Point Conception), Mexico, and Hawaii. Three other seats on the Council shall be referred to as "nonregional" seats and shall be filled by members not residing in the regions listed above.

Clause B. Duties. The Executive Council will pursue such policies and principles as shall be in accordance with the provisions of these Bylaws. The Executive Council, by a majority vote, shall have the power to fill, for unexpired terms, vacancies occurring in its membership; recommend changes in the Bylaws; develop objectives, policies, and programs; perform such other duties as are prescribed herein; and may assign to the Chairman any responsibilities authorized to it by the Bylaws.

ARTICLE IV. OFFICERS

Section 1. Officers. The Officers of the Group shall be a Chairman, a Chairman-elect, a Secretary, and a Treasurer. Any member in good standing may be elected to an office. The Executive Council, with the exception of the Officers, will serve as a nominating committee. The Officers will be elected by a majority vote of the membership voting in an election held at least 30 days prior to the annual meeting. Officers will serve for the succeeding year.

Section 2. Chairman. The Chairman shall be responsible for executing the objectives, policies, and programs developed by the Executive Council and membership, and for all those administrative and managerial decisions, duties, and activities normally associated with carrying on the affairs of such an organization. He shall preside over meetings of the Executive Council and the Group, present a report to the Executive Council at its annual meeting and carry out other duties as assigned by, or assumed under, the broad policies of the Executive Council. In the absence of the Chairman, or upon his inability to serve, duties shall be assumed by the Chairman-elect.

Section 3. Chairman-elect. The Chairman-elect shall be assigned duties by the Chairman. The Chairman-elect shall succeed to the office of Chairman upon the completion of the Chairman's term of office.

Section 4. Secretary. The Secretary shall be assigned duties by the Chairman. He will be responsible for taking minutes at Group and Executive Council meetings.

Section 5. Treasurer. The Treasurer shall be responsible for all funds of the Group. Assets in the general-fund accounts shall be made subject to the single signature of the Treasurer, Chairman, and other members approved by the Executive Council.

ARTICLE V. ELECTIONS AND FILLING EXECUTIVE COUNCIL SEATS

Section 1. Nominations. Before 1 May of each year, the Secretary will announce in a Group publication or by card or letter the regional and non-regional seats that will be open in the next calendar year. Nominations for these seats will be received by the Coordinator of the Election Committee until 1 June of the same year.

Section 2. Balloting. When more than one member has been nominated for a single regional seat or more than three members have been nominated for the three nonregional seats on the Executive Council, the Coordinator of the Election Committee will mail a ballot bearing the nominations to all members with residence in the area represented by the seat. Prior approval shall be obtained from said nominees. Members voting for nonregional seats vote for three of the nominees. Thirty days will be allowed for the election ballots to be returned to the Coordinator of the Election Committee. Seats representing specific regions will be filled by the nominees receiving the largest vote for each seat. The three nonregional seats will be filled by the three nominees receiving the highest number of votes. In the event of a tie, the selection shall be made by a majority vote of the current Executive Council. Vacancies occurring on the Executive Council due to a lack of nominations shall be filled by a majority vote of the Council. Council members elected in this manner need not live in the area they represent.

Section 3. Tenure. Members in regional and nonregional seats shall serve for terms of two calendar years. Executive Council members from Alaska, Washington, northern California, Mexico, and Hawaii shall serve two-year terms beginning in odd-numbered years. Executive Council members from British Columbia, Oregon, and southern California, and persons filling the three nonregional seats shall serve two-year terms beginning in even-numbered years. Members in regional and nonregional seats may serve successive terms.

ARTICLE VI. MEETINGS

Section 1. Executive Council.

Clause A. Frequency and Notice. The Executive Council shall meet annually at a time and place to be selected by the Executive Council. Executive Council meetings shall be open to the general membership. Special meetings of the Executive Council may be called by the Chairman or upon written request of three Executive Council members when in his or their opinion the business of the Executive Council so requires. Notice shall be addressed to all Executive Council Members at least 30 days prior to said meetings. Whenever possible, the time and place of the Executive Council meetings will be announced in a Group publication.

Clause B. Proxies. In the event a member of the Executive Council is unable to attend a meeting, he is authorized to appoint any qualified member of the Group as an alternate, provided that he has notified the Chairman in writing. The appointment of any alternate to act for a member of the Executive Council shall be recorded in the minutes of the meeting.

Clause C. Quorum. Nine members of the Executive Council shall constitute a meeting quorum for the transaction of business.

Section 2. Group Meetings.

Clause A. Frequency and Notice. Meetings of the Group will be held as often as the Executive Council deems necessary at such times and places as designated by the Executive Council. Due notice of Group meetings shall be given to all members at least 30 days in advance through a Group publication or by letter or card to their last known mail address.

Clause B. Resolutions. Resolutions proposed for consideration at any meeting of the Group, except for expressions of appreciation, must have prior approval of a majority of the Executive Council.

ARTICLE VII. FISCAL MANAGEMENT

Section 1. General. The fiscal affairs of the Group shall be under the supervision of the Executive Council and shall be handled by the Treasurer.

Section 2. Administration of Assets. Income from dues or contributions shall be placed in a federally-insured bank or savings and loan association.

ARTICLE VIII. RESOLUTIONS AND PUBLIC STATEMENTS

The Executive Council shall, as need arises, formulate and publish statements expressing the position or attitude of the Group on matters coming under the provisions of Article 1 of the Bylaws. When an issue is known to be highly controversial, with the membership holding widely divergent opinions, the views of the members shall be solicited.

ARTICLE IX. PUBLICATIONS

The Group shall issue publications as determined by the Executive Council.

ARTICLE X. DISSOLUTION

Upon dissolution of the Pacific Seabird Group, the Executive Council shall distribute the assets and the accrued income of the Group, as determined by the Executive Council, to one or more organizations which are organized and operated exclusively for educational and/or scientific purposes and which have established their tax-exempt status under section 501 (c) (3) of the Internal Revenue Code.

ARTICLE XI. AMENDMENTS TO BYLAWS

Section 1. Origin. Amendments to these Bylaws must be ordered to be submitted to the voting membership for action either by a majority of the members present at any annual meeting of the Group, or by a majority of the Executive Council.

Section 2. Adoption. These Bylaws may be altered or amended by a majority vote of the members present at any regular or special meeting of the Group, if advance notice of the proposed changes is contained in the notice of the meeting; provided, however, that any member unable to attend the meeting may request the Secretary in writing before such meeting to register a vote for him either for or against the amendment in question and such votes shall be counted with the votes of the members present. These Bylaws may also be altered or amended by a majority of the members who return ballots in response to a proposed amendment, notice of which must have been mailed to

all voting members at least 30 days prior to the close of the ballot. The results of all such ballots shall be filed with the permanent records.

DUTIES OF OFFICEHOLDERS

Chairman

- (1) Oversee all activities of the Group
- (2) Play a central role in initiating, editing, and distributing PSG policy statements
- (3) Act as official spokesman for the Group
- (4) Designate people to carry out certain tasks not covered by the duties listed for other officers
- (5) Chair the meetings of the Executive Council and of the full membership
- (6) Inform the Executive Council of PSG activities
- (7) Keep abreast of conservation issues and inform council members when appropriate
- (8) Write a Chairman's Page for each PSG Bulletin

Chairman-elect

- (1) Carry out duties assigned by the Chairman
- (2) Act as program chairman for the annual meeting by requesting, receiving, selecting, and editing abstracts and sending them to the Coordinator of Local Committee for inclusion in the program
- (3) Investigate locations for future annual meetings. The Chairman-elect should come to the council meeting with information on the location for the next meeting and a choice of two or three sites for the meeting to be held in two years.

Secretary

- (1) Arrange for printing and mailing of Bulletins, meeting announcements, etc.
- (2) Take minutes at annual council and membership meetings
- (3) Maintain a list of publications and organizations to receive notice of

PSG meetings and other activities

- (4) Serve as liaison to Coordinator of Local Committee
- (5) Prepare notice of request for nominations for Regional and Nonregional Representatives and send to the members

Treasurer

- (1) Receive membership applications, requests for Bulletins, etc
- (2) Keep listing of current members on address labels and send labels to the Secretary for mailing of the Bulletin
- (3) Maintain PSG funds in a financial institution
- (4) Receive receipts from persons authorized to spend PSG money and reimburse them by check
- (5) Complete income tax statement and perform other duties relating to PSG's status as a tax-exempt group
- (6) Prepare a treasurer's report for the annual meeting and Bulletin
- (7) Receive income from dues and sale of Bulletin

Regional Representatives

- (1) Contact seabird researchers in their region at least once a year and report all current research in the regional report
- (2) Keep abreast of marine conservation issues in the region and report at least one of the issues in each regional report; send newspaper clippings on important conservation issues to the Chairman
- (3) Establish and maintain contact with local conservation groups so that PSG is aware of their activities and they are aware of PSG's
- (4) Keep copies of all correspondence with seabird researchers and conservation groups

Editor

- (1) Contact individuals and organizations concerning potential articles for the Bulletin
- (2) Receive and edit regional reports, articles, bulletin board items, etc.
- (3) Produce final copy of the Bulletin and send to the Secretary for printing and mailing

Nonregional Representatives

- (1) Represent the PSG in areas away from the west coast of North America
- (2) Report to the Chairman and the Council on conservation issues and research away from the west coast of North America

Coordinator of Local Committee

- (1) Make arrangements for use of meeting facilities
- (2) Produce a meeting announcement, pre-registration form, and call for papers and send to Secretary for mailing
- (3) Form and coordinate Local Committee
- (4) Carry out activities outlines in PSG meeting instructions
- (5) Keep records of all money spent and received and prepare a budget statement after meeting

Working Committee Coordinators

- (1) Report to the Council the activities and accomplishments of the working group

Election Committee Coordinator

- (1) Receive nominations for Council seats
- (2) Mail ballots
- (3) Tabulate ballots and inform Council members and the Editor

SCIENTIFIC TRANSLATIONS COMMITTEE

A bibliography on available ornithological translations is nearing completion. The Josselyn van Tyne Library of the Wilson Ornithological Society has agreed to be the depository for the completed bibliography and any current translations the PSG committee and the AOU Translations Committee send it. PSG members may obtain copies of translations held by the JvT library for the cost of photocopying and mailing.

The national depository for translations is the John Crerar Library in Chicago. The PSG and AOU committees, the JvT and Crerar libraries are negotiating for a tie-in with the National Clearinghouse for Translations.

The JvT Library is preparing a list of the translations in their holdings: citations of seabird articles of interest will appear in the PSG Bulletin as soon as their list is available.

The following is a list of translations our committee has found and sent to the JvT Library:

Meredov, M., and V. I. Golovkova. 1978. [Helminth fauna of the waterfowl of the Murgab River Valley, Turkmenistan]. Izv. A. N. Turkmeneskoi SSR 15(2): 38-43.

Rustamov, E. A. 1977. [Nyctea scandiaca fly into Turkmenistan]. Izv. A. N. Turkmeneskoi SSR 14(3): 86.

Rustamov, E. A. 1977. [On the characteristics of the spring bird population in Murgab Oasis]. Izv. A. N. Turkmeneskoi SSR 14(2): 83-6.

Rustamov, E. A., and A. Khakiyev. 1978. [On the wintering of waterfowl on the Kelif Uzboi Lakes, Karakum Desert]. Izv. A. N. Turkmeneskoi SSR 14(6): 96-9.

Shuntov, V. P. 1961. [Migrations and distribution in spring and summer of marine birds in the SE part of the Bering Sea]. Zool. Zh. 40(1): 1058-69 (from Craig Harrison).

Shuntov, V. P. 1963. [Summer distribution of kittiwakes in the Bering Sea]. Ornitologiya 6: 325-330 (from Gerry Sanger).

Shuntov, V. P. 1964. [Transequatorial migrations of the thin-billed stormy Petrel (Short-tailed Shearwater)]. Zool. Zh. 43(4): 590-8 (from Craig Harrison).

Shuntov, V. P. 1965. [On the tubarines and alcids of the Bering Sea].
Ornitologiya 7: 276-286 (from Gerry Sanger).

Shuntov, V. P. 1968. [Numerical record of sea birds in the Eastern part of
the Indian Ocean]. Okeanologii 8(3): 394-400 (from Craig Harrison).

Shuntov, V. P. 1968. [Counts of flying fishes in the Indian Ocean]. Trudy
Ikhtyolog. 8(6): 784-9 (from Craig Harrison).

Shuntov, V. P. 1972. [Ornithogeographic division of the world ocean].
Zool. Zh. 51(10): 1535-1546 (from Craig Harrison).

Shuntov, V. P. 1975. [Sea birds] Lyudi, nauka, okean. 2 pp. (from Gerry
Sanger).

Veprintsev, B. N. 1979. Wildlife sound recording in the Soviet Union. Rec.
Sound 74-5: 45-52 (from Jeff Boswall).

Kistchinski, A. A. 1976. [Numbers of waterfowl on the Chukotsk Peninsula].
Byull. Mosk. Obsh. Prir., Biol. otdel. 81(6): 40-50 (from Chip Welling).

Kistchinski, A. A. 1957. [On the biology of the gyrfalcon on the Kol'skii
Peninsula]. Ornithologiya 1: 61-75 (from Chip Welling).

We are continuing our review of the foreign literature and will publish
short abstracts every issue as they are processed.



Laysan Albatross

TRANSLATIONS BIBLIOGRAPHY

Listed below are translations of foreign articles of interest to PSG members. These have been selected from a list of over 650 translations obtained by Doug Siegel-Causey. The entire list may eventually be published by the AOU. Included below are all papers dealing with seabirds, all dealing with charadriiform birds, and about half of the articles dealing with waterfowl. A code number at the end of each citation indicates the source of supply (listed at the end of the list) and the translation number(s). Doug is still trying to arrange a system under which PSG members could easily and cheaply obtain translations; however, until then, members should contact agencies directly for papers they need.

Sphenisciformes

PRYOR, M. E. 1965. Mortality of young Emperor Penguins (Aptenodytes forsteri). Prob. Arktiki i Anarktiki 1965(19): 54-61 BLLD: 8052.98F/RTS-6479

STEGMANN, B. K. 1970. Peculiarities of the morphology of the wing in penguins. Ornith. Digest USSR Monogr. Zool. Inst. 47: 236-248. CSIRO: 12372(A)

Procellariiformes

JOUANIN, C. 1970. The Mascarene Black Petrel Pterodroma aterrima. Vis. Rev. Franc. Ornith. 40(1): 48-68. NTC: 71-14460-060

MATHIASSEN, S. 1963. Fulmars Fulmarus glacialis in Swedish waters: a biometric-morphological study in order to establish their geographic origin. Our Birds 22: 271-289. CWS: TR-SWE-12

Anseriformes

ARDAMATSKAYA, T. B. 1965. The importance of the Tendrov and Yagorlyts bays in the Black Sea as nesting and moulting places for waterfowl. In: Isakov (1965): 213-219 (q.v.)

BANNIKOV, A. G., and P. P. TARASOV. 1957. The biology of the Ruddy Shelduck (Tadorna ferruginea). In: Shevareva 1957 (q.v.)

BERGMAN, G. 1961. The migrating populations of the Long-tailed Duck Clangula hyemalis and Common Scoter Melanitta nigra in the spring of 1960. Suomen Riista 14: 69-74. CWS: TR-FIN-9

BEZZEL, E. 1960. The European Pochard. The New Brehm Lib. 405: 1-108. CWS: TR-GER-82

- BIANKI, V. V. 1965. Summer distribution of waterfowl in the White Sea. In: Isakov 1965: 96-99 (q.v.)
- BIANKI, V. V. 1965. Fall flight of the waterfowl across the White Sea. In: Isakov 1965: 99-101 (q.v.)
- FEDORENKO, A. P. 1965. Reserves of Anatinae birds in the wintering places of Black and Azov Seas. In: Isakov 1965: 211-213 (q.v.)
- FLINT, V. E. 1965. Numbers of ducks and geese at the NE coast of the Kola peninsula. In: Isakov 1965: 108-111 (q.v.)
- GUDMUNDSSON, F. 1932. Observations made on Icelandic Eiders. Beit. z. Fortpflanz. Vogel 1932(3/4). CWS: TR-GER-5
- HELMINEN, M., and I. STEN. n.d. Finnish literature on wildfowl. State Game and Fish Inst., Helsinki. CWS: TR-FIN-2
- ISAKOV, Yu. A. 1963. Counting and prospecting the numbers of waterfowl. In: Formozov and Isakov 1963: 36-80 (q.v.)
- ISAKOV, Yu. A. 1965. Geography of the resources of the waterfowl in the USSR, vol. 1. Moscow Society of Naturalists and Institute of Geography of the Acad. Sci. USSR, Moscow. CWS: TR-RUS-84
- ISAKOV, Yu. A. 1965a. Geography of the resources of the waterfowl in the USSR, vol. 2. Ibid. CWS: TR-RUS-89
- ISAKOV, Yu. A. 1965b. Waterfowl resources of the USSR and development. Moscow. NTIS: TT-67-51263
- KARPOVICH, S. G. 1965. The work of the Kandalaksha game preserve in the field of establishing the seasonal distribution and numbers of waterfowl in the White and Barents Seas. In: Isakov 1965: 37-39 (q.v.)
- KHARCHENKO, V. I., and V. A. MINORANSKY. 1965. Concerning the present condition of the waterfowl game in the eastern Azov Sea area. In: Isakov 1965: 232-236 (q.v.)
- KOSTIN, Yu. V. 1965. Concerning the reserves of waterfowl game in the region of the Lebyazh'i islands. In: Isakov 1965: 228-232 (q.v.)
- KUMARI, E. V. 1965. Urgent problems in the international protection of the waterfowl in the area of the Baltic Sea. In: Isakov 1965: 31-37 (q.v.)
- KUZYAKIN, V. A. 1965. Concerning the methodology of counting waterfowl. In: Isakov 1965: 48-54 (q.v.)
- LEMMETYINEN, F. 1966. Damage to waterfowl caused by waste oil in the Baltic area. Suomen Riista 19: 63-71. CWS: TR-FIN-8
- PORTEMENKO, L. A. n.d. Age and seasonal changes in Eider plumages. Tr. Zool. Inst. A. N. SSSR 11(4): 1100-1113. CWS: TR-RUS-55

- RAKHILIN, V. K. 1965. Flight of water fowl near the Zhizhgin Islands on the White Sea and near the Seven Islands on the Barents Sea. In: Isakov 1965: 102-108 (q.v.)
- SABINEVSKY, B. V. 1965. Numbers and distributions of waterfowl wintering in Yagorlyts and Tendrov bays in the Black Sea. In: Isakov 1965: 219-224 (q.v.)
- SCHIØLER, E. L. 1926. Survey of the birds and ducks of Greenland. II. Diving Ducks. Birds of Denmark. CWS: TR-DAN-3
- SCHIØLER, E. L. 1955. Eider Ducks. CWS: TR-DAN-9
- SHIØLER, E. L. 1956. Eider Ducks. CWS: TR-DAN-10
- TIMMERMAN, A. 1962. The Barnacle Goose Branta leucopsis in the Netherlands. Limosa 35(3-4): CWS: TR-DU-1
- USPENSKII, S. M. 1972. The Eiders (Somateria spp). Ziemsen Verlag 452: 1-103. CWS: TR-GER-76
- VELIZHANIN, A. G. 1965. Experience in the census of marine ducks on the Kurile Islands. In: Isakov 1965b: 201-203 (q.v.)
- VERSHININ, A. A. 1965. The commercial hunting of moulting diving drakes in the Ust-Kamchatka region. In: Isakov 1965b: 190-195 (q.v.)
- VINOGRADOV, V. V. 1965. Water and swampfowl distributions in the Mili Steppe and the prospects of their utilization. In: Isakov 1965a: 290-294 (q.v.)
- VINOKUROV, A. A. 1965. Wintering of waterfowl in the southeastern Azov Sea region. In: Isakov 1965a: 236-241 (q.v.)
- ZWARTS, L. 1976. The Greylag Goose A. anser of the brackish tidal habitat: the Ventjagersplate. Limosa 45(3-4): 119-134. CWS: TR-DU-8
- ZYKOVA, L. Yu., K. D. ZYKOV, and S. G. PRIKLONSKII. 1965. Experiments in counting waterfowl from planes. In: Isakov 1965a: 54-57 (q.v.)
- Charadriiformes
- AZHIMURATOV, Kh. 1975. The spring migration of Charadriiformes in the delta of the Amu Darya River. Proc. All-Union Conf. Bird Migr. 1: 101-102. NRCC: C-20428, CWS: TR-RUS-370
- BAKEEV, N. N. et al. 1957. New information on the distribution and ecology of the seagull Larus genei. In: Shevareva 1957 (q.v.)
- BELOPOLSKII, L. O. 1951. The Puffin Fratercula arctica. Chistikogo Ptitsy Vostochnoi Atlantiki. BLLD: 8052.98F/RTS 11016
- BIANKI, V. V. 1967. Gulls, shorebirds and alcids of Kandalaksha Bay. Kandal. Gos. Zaprov. Tr. 1967 (6): 1-300. NTIS: PB 271 963-T, TT 76 50004

BORODULINA, T. L. n.d. Biology and economic importance of gulls and terns of southern USSR water bodies. CWS: TR-RUS-103

GOETHE, F. 1963. Behavioral differences between European forms of the Herring Gull group (Larus argentatus, L. cachinnans and L. fuscus). J. f. Ornith. 104(2): 129-141. CWS: TR-GER-78

GOLOVKIN, A. N., N. A. ZELIKMAN, and A. A. GEORGIEV. 1972. Biology and feeding connections of auks (Plautus alle) with a pelagic association near Novaya Zemlya. In: Golovkin 1972: 78-89 (q.v.)

GUBKIN, A. A., and A. V. SAVRANSKII. 1975. Certain data on the migration of Charadriiformes on the Dnepropetrovshchina. Proc. All-Union Conf. Bird Migr. 1: 118-119. NRCC: C-20652, CWS: TR-RUS-390

KAFTANOVSKII, Yu. M. 1941. Comparative characteristics of the breeding biology of some alciformes. Tr. Gos. Zapov. "Senostrovov" Glav. Upr. Zap. SNK RSFSR 1941: 53-72. BLLD: 8052.98F/RTS-11003

KARTASHOV, N. N. 1963. Brief survey of the counts methods of seagulls and Cephus birds. In: Formozov and Isakov 1963: 100-111 (q.v.)

KENZHEGULEV, K. 1965. Concerning the ecology and piscultural significance of the Herring gull on the south coast of the Aral Sea. Uzbekskii Biol. Zh. 9(5): 68-71. NTIS: TT-66-30313

KISHCHINSKII, A. A. 1968. The biology of Kittlitz's murrelet and the Marbled Murrelet. Ornit. 9: 208-213. CWS: TR-RUS-190

KOCWA, E., and J. SZEWCZYK. 1969. Seagulls, their biology and role in health and hygiene. Wszechwiat 3: 72-75. NRCC: C-13421, CWS: TR-POL-4

KOENIG, D. 1961. The Gull-billed Tern Gelochelidon nilotica as bird breeding in Schleswig-Holstein in 1960. The World of the Bird 82(1): 1-6. CWS: TR-GER-88

KOMNICK, H. 1963. EM Investigations on the function and morphology of the ion transport in the salt gland of Larus argentatus. III. Tubulus epithelial cells. Protoplasma 56: 605-636. NTC: 72-11959-06C

KOZLOVA, E. V. 1961. Trends of evolution in Charadriinae on the basis of a study of the skull structure. Akad. Nauk SSR Zool. Inst. 29: 183-212. BLLD: 8052.98F/RTS-8848; NTIS: TT-73-55011, TT-75-21677.

KOZLOVA, E. V. 1961. Birds: Charadriiformes, Suborder Alcae. Fauna USSR Nov. Ser 65: 1-140. NTIS: TT-60-21815

KUMARI, E. V. 1977. The Whimbrel. Die Neue Brehm-Buecherei 501: 1-64. CWS: TR-GER-133

LABUTIN, Yu. V. 1959. The Least Curlew of Verkhoyansk. Ornit. 2: 111-114. NRCC: C-14586

- LEBEDEVA, M. I. 1957. Results of banding certain species of shorebirds. In: Shevareva 1957 (q.v.)
- LEBEDEVA, M. I. 1962. The migrations of the Common Tern. Migratsii Zhivotnykh 1962(3): 87-91. NTIS: TT-64-13599
- LIND, H. 1963. Notes on the social behavior of terns. Dansk. Ornit. Foren. Tidskr. 57(3): 155-175. NTC: 70-11651-06C
- MYRBERGET, S. 1960. Hunting Puffins on Lovunden. Hunting Fishing and Open Air Life 1960(8): 3-7. CWS: TR-NOR-7
- NEUB, M. 1974. On the roosting behavior of the Black-headed Gull Larus ridibundus in South German wintering quarters. J. f. Ornit. 115(1): 62-78. CWS: TR-GER-134
- PANOV, E. 1963. Taxonomic position of the Ussuri Plover Charadrius hiaticula pladucis on the basis of ethological data. Zool. Zh. 42(10): 1546-1553. NTIS: TT-65-63526
- PORTEMKO, L. A. 1972. The Grey Phalarope Phalaropus fulicarius of Chukotsk and Wrangel Island. NRCC: C-15387
- PORTEMKO, L. A. 1972. The Ivory Gull. In: Birds of Chukotsk and Wrangel Island. NRCC: C-15388
- PORTEMKO, L. A. 1972. The Red Knot Calidris canutus. In: Birds of Chukotsk and Wrangel Island. NRCC: C-15386
- PORTEMKO, L. A. 1972. Gulls of Chukotsk and Wrangel Island. CWS: TR-RUS-255, NRCC: C-12211
- PORTEMKO, L. A. 1973. Ross's Gull. In: Birds of Chukotsk and Wrangel Islands, pt. 2. NRCC: C-15032
- RUPPELL, G. 1969. Contributions to the behavior of the Little Auk. J. f. Ornit. 110: 161-169. NTC: 73-22186-06F
- SAMUSEV, I. F. 1973. Shorebirds of E. Kazakhstan. Vestnik Zool. 1973(2): 70-72. NRCC: C-15164
- SCHUMACHER, S. n.d. On the functional aspects of the bills of Snipe. Zeits. Morph. Okel. Tiere 15: 90-108. CWS: TR-GER-3
- SEMENOV, S. M., and B. V. Sabinveskii. 1957. Seasonal distribution and migration of the gull Larus genei according to banding data and visual observations. In: Shevareva 1957 (q.v.)
- SHNAKENWINKEL, G. 1970. Studies on the populations of the Oystercatcher (M. ostra), in Mellum. Vogelwarte 25: 336-355 BLLD: 8052.98F/RTS--11179, NTC: 79-13013-06C
- SHEVAREVA, T. P. 1962. New data on recoveries of banded Caspian Terns. Migratsii Zhivotnykh 1962(3): 92-105. NTIS: TT-64-13597

TOLCHIN, V. A. 1975. The character of the migration of charadriiformes in the northern Baikal region and its link with spring temperatures. Proc. All-Union Conf. Bird Migr. 1: 144-145. CWS: TR-RUS-386, NRCC: C-20712

USPENSKII, S. M. 1957. Seasonal distribution and migration of the Scandinavian Silver Herring Gull Larus argentatus omissus according to USSR banding data. In: Shevareva 1957 (q.v.)

VELIZHANIN, A. G. 1976. Ross's Gull. Oksk. Gos. Zapoved. Tr. 13: 175-179. NRCC: C-21082

WINKEL, W. 1976. Experimental study of the brooding drive of the Herring Gull (Larus argentatus) in the wild. Ornith. Staz. 28: 212-229. CWS: TR-GER-132

YURLOV, A. K. 1975. Summer day movements of shorebirds in 1973 in the Lake Chany region. Proc. All-Union Conf. Bird Migr. 1: 159-162. CWS: TR-RUS-406

Translation of Fauna and Ecology of Waders

The Table of Contents for V. E. Flint, ed., Fauna and ecology of waders, Vol. I and II, Papers of a symposium held February and March 1973, Moscow Society of Naturalists, is listed below. The entire work is available as translation CWS TR-RUS-304: I and II from NRCC. Cost in September 1980 was about \$98, Canadian funds. NRCC numbers for individual papers are also given. In some cases (marked with ?) there are disagreements between Doug's list and the Table of Contents.

Table of Contents

Volume I:

FLINT, V. E. The main trends in the study of charadriiformes in the U.S.S.R. NRCC No. C-15506.

BRAUDE, M. I. Adaptive features in the structures of eyes of waders. NRCC No. C-15485.

BURCHAK-ABRAMOVICH, N. E. Fossil wader fauna of the U.S.S.R. No NRCC No.

KASHIN, G. N. On the history of the nomenclature of the superfamily charadrioidea. NRCC No. C-15298.

LEONOVICH, V. V. Some features on the distribution of sandpipers. NRCC No. C-13510.

STEPANYAN, L. S., and FLINT, V. E. On the systematic status of the rock sandpiper Calidris ptilocnemis. NRCC No. C-15426.

- FLINT, V. E. (ed.). Chick-feign as a peculiar type of distraction display of waders. NRCC No. C-13215.
- BAKEEV, N. N. Distribution, numbers and hunting of the woodcock in some areas of the European part of the U.S.S.R. NRCC No. C-14951.
- BELOPOLSKII, L. O., and G. P. GORYAINOVA. Breeding ecology of the oyster-catcher on the Baltic and White Seas in 1970. NRCC No. C-14953.
- BOLOTNIKOV, A. M., A. A. DOBRODEEVA, and S. S. KALININ. On the breeding biology of the lapwing in the Kurgan region. NRCC No. C-14956.
- GORELOV, Y. K., and R. I. GORELOVA. The cream-coloured courser (*Cursorius cursor*)-the wader of the waterless deserts. NRCC No. C-14989.
- GREKOV, V. S., et al. On the biology of the woodcock in the southwest Ukraine. No NRCC No.
- GUBKIN, A. A. On the biology of the black-winged pratincole and black-winged stilt in the Dnepropetrovsk region. NRCC No. C-14991.
- DYAKOV, Yu. V. On the ecology of the common sandpiper in the Smolensk region. NRCC No. C-14967.
- EVGENOV, D. N., and V. A. KUZYAKIN. Courtship behaviour of woodcocks and boundaries of the geographical complexes. No NRCC No.
- IYGI, A. I. On the biology of the black-tailed godwit in the Estonian S.S.R. NRCC No. C-14997.
- KAZAKOV, B. A. Collared pratincoles in the lowlands to the north of the Caucasus. NRCC No. C-15001.
- KISHCHINSKII, A. A. Foods of the Siberian pectoral sandpiper (Calidris acuminata) in the tundras of north-east Yakutiya. NRCC No. C-15002.
- KISHCHINSKII, A. A. Foods of the pectoral sandpiper in the tundras of north-east Yakutiya. NRCC No. C-15003.
- KISHCHINSKII, A. A. Breeding biology and breeding behaviour of grey phalarope in the tundras of east Siberia. NRCC No. C-13322.
- KISHCHINSKII, A. A., and V. E. FLINT. Materials on the biology of the dowitcher in east Siberian tundras. No NRCC No.
- KISHCHINSKII, A. A., and V. E. FLINT. A case of double nesting involving the little stint. NRCC No. C-13323.
- KISHCHINSKII, A. A., and V. E. FLINT. The biology of the ruff in the Yana-Indigirka lowlands. NRCC No. C-15005.
- KISHCHINSKII, A. A., and Yu. I. CHERNOV. Foods of the grey phalarope in the tundras of east Siberia. NRCC No. C-13232.

- KISHCHINSKII, A. A., and Yu. I. CHERNOV. Foods of the red-necked phalarope in the Indigirka river delta. NRCC No. C-15004.
- KOKHANOV, V. D. Materials on the biology of the Temminck's stint in Kandalaksha bay in the White Sea. NRCC No. C-13505.
- KRIVONOSOV, G. A., D. V. BONDAREV, and G. M. RUSANOV. Nesting of the oyster-catcher in the outer parts of the Volga delta. NRCC No. C-15316.
- KUCHIN, A. P. The distribution, abundance and biology of certain snipe species in the Altai. No NRCC No.
- LEONOVICH, V. V. Data on the spoon-billed sandpiper. No NRCC No.
- LEONOVICH, V. V. The distribution and biology of the long-toed stint. NRCC No. C-15325.
- LEONOVICH, V. V. The new breeding area of the snipe-billed godwit. NRCC No. C-15326.
- LEONOVICH, V. V. Observations on the biology of the red-wattled lapwing. NRCC No. C-15327.
- MAMBETZHUMAEV, A. M., and M. AMETOV. Data on the nesting biology of the northern black-winged stint in the valley of the lower Amu Darya river. NRCC No. C-15337.
- NECHAEV, V. A. The Latham's snipe of Sakhalin Island. NRCC No. C-15358.
- REVA, P. P. Alarm reaction in the oyster-catcher's young. NRCC No. C-15393.
- RODINOV, M. A. Some features of woodcock biology. No NRCC No.
- SOLOMATIN, A. O. Data on the biology of the sociable plover on the Turgai Plateau. NRCC No. C-15423.
- TOMKOVICH, P. S. Data on the breeding biology of the spotted redshank. NRCC No. C-15436.
- FILONOV, K. P., and V. I. LYSENKO. The avocet of the Molochny estuary (Azov Sea). NRCC No. C-15262.
- FLINT, V. E. Data on the biology of the broad-billed sandpiper. NRCC No. C-15264.
- FLINT, V. E., and A. A. KISHCHINSKII. Data on the biology of the Siberian pectoral sandpiper. NRCC No. C-15265.
- CHUNIKHIN, S. P. Data on the ecology and distribution of the red-wattled lapwing and the white-tailed plover. NRCC No. C-15244.
- SHCHERBAKOV, B. V. Data on the biology of the dotterel of the western Altai. NRCC No. C-15414.

- ZLOBIN, B. D. Waders as a hunting object in the Kiro Oblast. No NRCC No.
- IVANOVA, N. S. Data on the breeding biology of waders. No NRCC No.
- KARTASHEV, N. N. Summer wader populations in certain areas of the European part of the USSR. NRCC No. C-15528.
- KRIVITSKII, I. A. Data on the feeding of certain wader species in the steppes of the Tselinograd region. NRCC No. C-15546.
- PAVLOV, M. I. Patterns and intensity of the influence of hunting on wader populations in the basin of the middle reaches of the Volga river. No NRCC No.
- POLYAKOVA, A. D., and V. R. RADETSKII. Certain peculiarities of wader nesting on reclaimed lands. NRCC No. C-15584.
- RADITSKII, V. R. Device for catching wader nestlings near their nest. NRCC No. C-13351.
- RAKHILIN, V. K. Notes on the feeding of waders in the Primorye territory. NRCC No. C-15590.
- RAKHILIN, V. K. Notes on the moulting of far eastern waders. NRCC No. C-13441.
- RUBINSTEIN, N. A. Comparative studies on the behaviour of certain wader species during the incubation period. No NRCC No.
- RUSANOV, G. M., G. A. KIRVONOSOV, and D. V. BONDAREV. Wader abundance in the lower parts of the Volga delta. NRCC No. C-15873.
- SOLOMATIN, A. O. The colonial nesting of waders in the Naurzum State Natural Reserve. NRCC No. C-15879.
- SREBRODOL'SKAYA, N. I. Data on the biology of waders in the western part of the Ukrainian Polesye. NRCC No. C-15880.

Volume II

- ARDAMATSKAYA, T. B. Nesting shore birds of the northern Black Sea region. NRCC No. C-14950.
- BRAUDE, I. I. Shore birds of the lower Ob. NRCC No. C-14959.
- BULAKHOV, V. L. Shore birds of the Dneprozershinsk Reservoir and of the rivers flowing into its left side. NRCC No. C-14961.
- BUT'EV, V. T. Distribution and numbers of some shore birds in the European part of the USSR. NRCC No. C-14962.
- VARSHAVSKII, S. N. Distribution and ecology of shore birds in the area north of the Aral Sea. NRCC No. C-15191.

VENGEROV, M. P. Shore birds of western and southwestern Turkmenistan. NRCC No. C-15192.

GERASIMOV, N. N., and P. S. VYATKIN. New data on the breeding of shore birds in Kamchatka. NRCC No. C-15510.

GRACHEV, V. A. Shore birds of the Ala-Kol depression. NRCC No. C-15514.

DANILOV, N. N., and V. K. RYABITSEV. Shore birds in the south Yamal. NRCC No. C-15495.

DUL'KEIT, G. D. Shore birds of the Shantar Islands. NRCC No. C-15498.

ZASYPKIN, M. Yu., and A. P. STEPNOV. Shore birds of the Chaun lowlands. NRCC No. C-15630.

KIRYUSHCHENKO, S. P. Biology and numbers of shorebirds on the Chukotsk peninsula. NRCC No. C-15536.

KOSTIN, Yu. V. Shore bird fauna of the Crimea. NRCC No. C-15540.

KRIVENKO, V. G., and G. A. KRIVONOSOV. Distribution and biology of shore birds in the inland waters of Kalmykia. No. NRCC No.

KRIVONOSOV, G. A. New data on the breeding of shore birds in the Volga delta. NRCC No. C-15547.

KUMARI, E. V. Changes in the distribution and numbers of shore birds in Estonia in recent decades. No NRCC No.

LEBEDEVA, L. A. The birds of the Saratov Transvolga. NRCC No. C-15555.

LUGOVOI, A. E., and A. I. MOROZHIN. New data on the nesting of shore birds in Mordovia. NRCC No. ?

MOSKVITIN, S. S. Shore birds of the middle Ob' river basin and the phenology of their migration. NRCC No. C-15570 ?

OGUL'CHANSKII, A. Ya. Shore birds of the northern Azov region. NRCC No. C-15578 ?

OLEINIKOV, N. S., ET AL. Shore birds of the Caucasus lowlands. NRCC No. C-15150.

OCHAPOVSKII, V. S. Shore birds of the Krasnodar territory. NRCC No. C-15029 ?

PEKLO, A. M., and V. S. OCHAPOVSKII. The golden plover in the Krasnodar territory. NRCC No. C-15029 ?

SAMUSEV, I. F. Shore birds of eastern Kazakhstan. No NRCC No.

STRELKOV, V. E. Shore birds of the middle basin of the river Ob'. NRCC No. C-15181.

TATARINOV, K. A. Distribution of shore birds and seasonal dynamics of their numbers in the western Ukraine. NRCC No. C-15186.

FLINT, V. E. Shore birds on Wrangel Island. NRCC No. C-15086.

FOMIN, B. N., Yu. S. RAVKIN, and E. S. PREOBRAZHENSAYA. Shore birds of the southern taiga of western Siberia. NRCC No. C-15507.

SHIBNEV, B. K. Shore birds of the Bikin river basin. NRCC No. ?

SHKATULOVA, A. P. Species composition, numbers and migration of shore birds in Chitinsk province. No NRCC No.

SHCHEGOLEV, V. I. Distribution and ecology of some shore birds in the Chernozem centre of the European part of the USSR. NRCC No. C-15598.

GAVRIN, V. F. Spring migration of shore birds in the vicinity of lake Kurgal'szhin. NRCC No. C-15509.

VENGEROV, M. P. Shore birds migration in the lower Ob' valley. NRCC No. C-15618.

MEKLENBURTZEV, R. N. The migration of shore birds at Arnasai and Dal'verzin lakes in Uzbekistan. NRCC No. C-15851.

RAKHILIN, V. K. The migration of waders in central Sikhote-Alin. NRCC No. ?

STENCHENKO, A. M. The autumn migration of waders in the Kandalaksha Bay of the White Sea. NRCC No. C-15881.

TOLCHIN, V. A., V. I. BEZBORODOV, and V. G. VAINSHTEIN. Observations on the migration of waders in the Bratsk Reservoir. NRCC No. C-15885.

YAKHONTOV, V. D. The finding of banded ruffs on the Kolyma river. NRCC No. C-15895.

General

ANONYMOUS. 1965. Fish-eating birds and their significance in the fish economy. Nauka: Moscow. NTIS: TT-73-50021, PB-261 387-T.

CHERNYAVSKII, F. B. 1967. Relationships between the Arctic Fox and certain species of tundra birds. Zool. Zh. 1967: 939-994. CWS: TR-RUS-108A

CHERNYSHEV, M. V., and V. M. CHERNYSHEV. 1965. An unusual accumulation of transmigratory birds on the shores of Sakhalin Island. In: Isakov 1965a: 176-177 (q.v.)

DUBROVSKY, A. 1959. Birds perish in oil. Hunting and the hunting trade 13(4): 58. CWS: TR-RUS-281

DYRCZ, A. 1971. The passages and wintering of waterbirds on the Odra near Wroclaw. Acta Zool. Crac. 16: 291-308. NTIS: TT-74-54018

FORMOZOV, A. N. 1946. Snow cover as an integral factor of the environment and its importance in the ecology of mammals and birds. Mat. K. Pozn. Fauny i Flory SSSR Nov. Ser. Otd. Zool. 5(20): 1-152. NTIS: TT-64-20153

FORMOZOV, A. N., and Yu. A. ISAKOV (eds.). 1963. Organization and techniques of the count of birds and harmful rodents. Izd. USSR Acad. Sci. CWS: TR-RUS-83, NTIS: TT-66-51055

GAGINA, T. N. 1968. Birds of eastern Siberia. Nauka: Tomsk NTIS: TT-70-53101

GOLOVKIN, A. N. 1972. Peculiarities of biological productivity of waters near bird bazaars in the north of Novaya Zemlya. Nauka: Leningrad. NTIS: PB-267 499-T, TT-75-58024

GOLOVKIN, A. N. 1972a. Bird bazaars in the north of Novaya Zemlya. In: Golovkin 1972: 90-99 (q.v.)

GOLOVKIN, A. N., V. A. SLIROKOLOBOV, and G. P. GARKAVAYS. 1972. Peculiarities of distribution of biogenic elements near bird bazaars north of Novaya Zemlya. In: Golovkin 1972: 47-65 (q.v.)

IYGI, A. Yu. 1957. Mass spring flight of certain species of amphibious birds in the vicinity of the Pukhtu ornithological station. Estonian SSR. In: Shevareva 1957 (q.v.)

KISHCHINSKII, A. A. 1974. Arctic-alpine avifauna and its origin. Zool. Zh. 53: 1036-1051. BLLD: 8052.98F/RTS-9528, NTIS: TT-75-11449

KOENIG, D. 1963. The bird kingdom and water pollution in northern Germany. Int. Counc. Bird Prot. 3: 1-10. CWS: TR-GER-89

KOENIG, D. 1966. The situation of the inland water pollution and of the counter measures taken in the Federal Republic of Germany, with particular reference to the bird world. Int. Counc. Bird Prot. 6: 25-35. CWS: TR-GER-97

KUYKEN, E., and P. M. ZEGERS. 1968. The count of oil-smeared birds along the Dutch coast in February 1968. Amoeba 44(5): 153-158. CWS: TR-DU-5

L'HARDY, J.-P. 1962. The role of oil in the destruction of seabirds on the Finisteree Coast. Penn ar Bed 3: 187-191. CWS: TR-FR-33

MELNIKOVA, E. E., et al. 1973. Investigation of sera of aquatic birds, and those associated with water, shot in SW Bulgaria. Ekol. Virusov. 1: 152-155. NTIS: TT-77-21358

OSTAPENKO, V. A., et al. 1975. The molt and migration of certain birds on Kunashir Island in the fall of 1974. Proc. All-Union Conf. Bird Migr. 2: 86-89. CWS: TR-RUS-366

OUWENEEL, G. L. 1971. Consequences of the oil disaster in the Biesbos for geese stopping over during the winter of 1970-1 in the Hollands Diep-Haringvliet area. Korte Mededelingen 44(3-4): 185-188. CWS: TR-DU-6

- PINOWSKI, J. 1955. A method for quantitative investigation of birds on large areas. *Ekol. Polska*, Ser. B. 1(3-4): 107-111. NTIS: TT-63-11351
- PORTEMKO, L. A. 1972. Birds of the Chukotsk Peninsula and Wrangel Island. Leningrad: Nauka. ETC: 77110603-589
- PORTIER, P. 1934. The death process in birds whose feathers have been coated in fuel oil. *Bull. Nat. Acclim. Soc. France* 81: 449-452. CWS: TR-FR-19
- PORTIER, P., et al. 1934. Experimental zoology-The death process of birds whose feathers have been coated with hydrocarbons. *Seanc. Acad. Sci.* Feb. 26, 1934: 851-853. CWS: TR-FR-20
- POZDARYKOVA, L. A. 1972. Alkalinity and alkaline coefficient of the coastal waters near the bird bazaars north of Novaya Zemlya. In: Golovkin 1972: 13-32 (q.v.)
- POZDARYKOVA, L. A. 1972. Some data on the CO₂ concentration at the coast near bird bazaars north of Novaya Zemlya. In: Golovkin 1972: 33-46 (q.v.)
- de RIDDER, M. 1961. Winged victims of fuel oil. *Les Naturalistes Belges* 42: 145-156. CWS: TR-FR-32
- RINGLEBEN, H. n.d. Oil pollution: a danger for marine birds. *Water and Wastewater* 40: 57 ff. CWS: TR-GER-94
- RITTINGHAUS, H. 1956. On the indirect distribution of the oil pest in a seabird sanctuary. *Ornith. Inform.* 8(3): 43-46. CWS: TR-GER-98
- RUTILEVSKI, G. L. 1958. Birds of the Bolshoi Lyakhov Island. *Morkoi Transport*, Leningrad, 1-33. CWS: TR-RUS-106
- SAEZ, H. 1971. Mycological report on a few birds which suffered from "oil slicks." *Mykosen* 14(1): 31-40. CWS: TR-GER-36
- SHAPOSHNIKOV, L. K. 1954. On the modification of birds' sense organs in relation to their peculiarities of finding food. *Zool. Zh.* 33: 149-155. NTIS: TT-73-55009
- SHEVAREVA, T. P. 1957. Bird banding in the USSR. *Byuro Kol'tsevaniya Trudy* 9: 1-4, 46-143, 200-214, 223-319. NTIS: TT-63-32008
- SHUNTOV, V. P. 1965. Seasonal aspects in the distribution of seabirds in the open waters of the Japan Sea. *Zool. Zh.* 44: 411-422. CWS: TR-RUS-52
- SHUNTOV, V. P. 1966. Concerning wintering of birds in the far Eastern seas in the northern part of the Pacific Ocean. *Zool. Zh.* 45. CWS: TR-RUS-93
- SHUNTOV, V. P. 1972. Ornithogeographic divisions in the World Ocean. *Zool. Zh.* 51(10): 1535-1546. NRCC: C-14324, CWS: TR-RUS-283

- SHUNTOV, V. P. 1972. Marine birds and the biological structure of the Ocean: bird distribution in relation to interspecific competition for food. TINRO. CWS: TR-RUS-284
- SHUNTOV, V. P. 1972. Quantitative distribution of marine birds and the biological structure of the ocean. TINRO. CWS: TR-RUS-278.
- SHUNTOV, V. P. 1972. Seabirds and the biological structure of the ocean. Vladivostok. CWS: TR-RUS-290
- SHUMAKOV, M. E., and N. V. VINOGRADOVA. 1975. Age and populational variations in the duration of the migratory state in the Chaffinch. Proc. All-Union Conf. Bird Migr. 2: 91-94. CWS: TR-RUS-411
- UNKNOWN. 1963. Russian-English Bird Glossary. Ornithology 6 CWS: TR-RUS-21
- USPENSKII, S. M. 1958. The bird bazaars of Novaya Zemlya. Moscow. CWS: TR-RUS-39
- USPENSKII, S. M. 1961. Fauna of the Arctic. Priroda 50(8): 33-41. NTIS: TT-61-15277
- USPENSKII, S. M. 1963. Birds and mammals of Bennett Island. Proc. Arctic and Antarctic Inst. 224: 180-205. CWS: TR-RUS-309, NRCC: C-17252
- USPENSKII, S. M., R. L. BEME, and A. G. VELIZHANIN. 1963. Avifauna of Wrangel Island. Ornitologiya 6: 58-67. CWS: TR-RUS-20
- VELIZHANIN, A. G. 1975. Spring migration of aquatic and shore birds on the Kurile Islands. Proc. All-Union Conf. Bird Migr. 2: 9-11. CWS: TR-RUS-420, NRCC: C-21371
- VERESHCHAGIN, N. K. 1946. Death of birds from oil in Azerbaijan. Zool. Zh. 25(1): 69-80. CWS: TR-RUS-277
- VINOKUROV, A. A. 1963. Aerial censusing of wading birds on the Kuban delta shores. In: Formozov and Isakov 1963: 117-122 (q.v.)
- VOGT, H. H. 1964. The oil pest--the black death for aquatic birds. Bird Cosmos 1964(2): 42-43. CWS: TR-GER-96
- ZALETAEV, V. S. 1956. Scale for scoring the nutritional state of birds. Zool. Zh. 35: 441-444. BLDD: 8052.98F RTS-8801

Sources of Supply

NTC:

National Translations Center
The John Crerar Library
35 W. 33d Street
Chicago, IL 60616

NTIS:

NATIONAL TECHNICAL INFORMATION SERVICE
Operations Divisions
Port Royal and Braddock Roads
Springfield, VA 22151

ETC:

International Translations Centre
101 Doelenstraat
Delft, The Netherlands

BLLD:

BRITISH LIBRARY LENDING DIVISION
Boston Spa
Wetherby
Yorkshire SW1 5BD
United Kingdom

CSIRO:

Central Library
Commonwealth Scientific & Industrial Research Organization
P.O. Box 89
East Melbourne, Victoria
Australia

NRCC:

Canada Institute for Scientific and Technical Information
National Research Council of Canada
Ottawa, Ontario K1A 0S2
Canada

CWS:

Communications Section
Canadian Wildlife Service
Ottawa, Ontario K1A 0E7
Canada



Osprey

FIELD REPORT

Breeding of Black-naped and Greater Crested Terns, North Solomons Province, Papua New Guinea

On 24th March 1981 a visit was made to Mowensand Island ($6^{\circ}05' S$, $155^{\circ}32' E$), almost 10 km due north of Loloho, Bougainville Island, North Solomons Province, to check up on breeding terns previously sighted by Tony Skyrme and Ken Salmon.

The all-sand island is free of vegetation; it is located between Anusages (No. 3) Island and Kurukiki (No. 2) Island. It is surrounded by a reef which does not permit a close approach by larger boats and is exposed to heavy swells on its eastern side. It is approximately 300 m long, 50 m wide, and is no more than 2 m above mean high tide at its greatest height.

Details of the two species of terns found breeding are as follows:

Greater Crested Tern (*Sterna bergii*). A ca. 100-nest colony was found in a very small area on the highest level. There were four chicks recently hatched, and breeding appeared to be about 14 days behind that of the Black-naped Tern (*Sterna sumatrana*) colony. The eggs (one of which measured 62.7 mm x 38.8 mm) were whitish with pale grey splotches, dark brown spots, and irregular streaks resembling seaweed concentrated at the large end. These terns are frequently seen in Kieta Harbour (maximum number at one time in last 8 months, 50) feeding in association with the Common Tern (*Sterna hirundo*).

Hermit crabs were observed eating an egg and a dead chick. They may represent a significant threat to the colony.

Black-naped Tern (*Sterna sumatrana*). A dispersed ca. 50-nest colony was located at an elevation lower than that of the Greater Crested Tern colony. There were at least 40 chicks, some recently hatched and some almost fledged and showing the black streak on the nape. One nest had two chicks and an egg, while at least two nests had both gray-and-black mottled and plain buff

chicks. The egg measured 38.7 mm x 27.6 mm; it was buff with uneven brown and grey speckles which were more numerous and larger at the large end. These terns have not been seen in Kieta Harbour but have been recorded on the west coast of Buka Island and on the Jaba Delta (Hadden, in press). It is interesting that breeding is occurring outside the period given by Serventy et al. (1971) and Anonymous (1979), i.e., September to January, and the description of the placement of nests in Serventy et al. (1971), "...as many as seven in a square yard..." is contrary to what was observed on Mowensand Island, where the nests were 1 m apart or more.

Other species recorded on the island were Beach Stonecurlew (Burhinus neglectus), 1; Whimbrel (Numenius phaeopus), 2; Ruddy Turnstone (Arenaria interpres), 6; Eastern Golden Plover (Pluvialis dominica), 140; Common Noddy (Anous stolidus), 5; Eastern Reef Heron (Egretta sacra), 1 black and 1 white phase. On the journey home ca. 100 Lesser Frigatebirds (Fregata ariel) were seen flying towards No. 3 Island from the southeast.

It is believed that these breeding records are the first for the North Solomons.

Those in the party were Tony Skyrme, Ken Salmon, and Laurie and Alison Howell.

Literature cited:

- Hadden, D. 1980. Birds of the North Solomons (in press).
- Anonymous. 1979. Readers Digest complete book of Australian birds.
- Serventy, D. L., V. Serventy, and J. Warham. 1971. The handbook of Australian seabirds.
- A. C. Skyrme, K. Salmon, L. and A. Howell. Arawa and Kieta, North Solomons Province, Papua New Guinea.

EVALUATION PANEL REPORT REVIEW OF FEDERAL PROGRAMS IN ENVIRONMENTAL IMPACT STUDIES OF PETROLEUM IN THE MARINE ENVIRONMENT

In 1980 an evaluation panel of 15 nongovernment scientists and managers (including PSG member Dee Boersma) reviewed federally funded projects and programs engaged in studies related to petroleum pollution in the marine environment for the Interagency Committee on Ocean Pollution Research, Development, and Monitoring (COPRDM, say "copper dam"). The findings of the evaluation panel and the recommendations of COPRDM were to be used in development of a comprehensive plan for federal ocean pollution research development and monitoring activities under Public Law 95-273 (The National Ocean Pollution Research, Development, and Monitoring Planning Act of 1978).

The panel's report (the heading of this item is the exact title) was issued by NOAA in December 1980. Large sections of the report are reprinted below.

1. INTRODUCTION

It is urgent that the United States develop a comprehensive, integrated national program for energy conservation and development that effectively weighs and considers the overall costs and benefits of different strategies to meet the nation's energy needs. Development of the petroleum resources of the outer continental shelf (OCS) is a recognized goal of U. S. public policy. Such exploitation must also minimize avoidable adverse impacts on associated natural and social environments. Although tradeoffs between petroleum resource uses and environmental protection will occur, an environmentally sound development plan based on data that can withstand both legal and scientific scrutiny offers the best chance for acquiring petroleum resources at the least social cost. Such a plan must be based on a comprehensive statement of goals and objectives, and must identify and fill scientific information gaps in a timely manner. Federal efforts in marine petroleum pollution research, development, and monitoring, which were presented to the evaluation panel during this review, do not appear to fully satisfy these criteria.

Successful application of scientific findings to management decisions depends on basic scientific understanding of the phenomena to which the findings pertain, together with effective information transfer to, and adoption by, resource managers. The ultimate test of scientific quality is technical competence for which the established criterion is peer acceptance based on publication of results in the refereed, open scientific literature. Any scientific efforts undertaken in support of OCS petroleum resource development must, therefore, be based on a basic understanding of OCS environments. For scientific efforts to be credible and, therefore, useful in reaching

sound and responsible leasing and other management decisions, it must result in publications of a quality equivalent to those in established refereed journals. Much, but not all, of the science described during the review meets this criterion.

A growing body of scientific results supports the following conclusions:

1. Oil spills associated with recovery and transport of oil have effects related to the size of the spill, type of oil, and environmental conditions; however, oiled environments in temperate areas generally appear to recover in one to 10 years to support communities similar to those extant before the spill.
2. Properly operated petroleum recovery operations in historic OCS areas of the U. S. have not resulted in major adverse effects on marine resources, but long-term ecological effects have not been adequately studied in a quantitative manner.
3. Oil spills can have long-term subtle sublethal effects on specific marine populations (especially birds and inhabitants of fine-grained intertidal habitats) and might have catastrophic effects in species already endangered by low population levels, e.g., whales and turtles.
4. Activities related to petroleum development can have major and long-lasting socio-economic effect, both positive and negative, on neighboring coastal regions.

The conclusions summarized above provide a framework for controversy about the nature, funding level, duration, and balance of research programs designed to provide information needed for appropriately informed decision making on OCS petroleum development and determination of acceptable levels of petroleum pollution. The absence of long-term studies on the implications of sublethal effects on marine ecosystems underlies much of this controversy and could be corrected by appropriately designed and quickly initiated long-term studies of frontier areas and studies of the cumulative impacts of long-term oil recovery activities carried out in historic OCS oil lease areas. The potential for controversy surrounding research and management decisions related to OCS development demands that funds for research be directed to real, rather than apparent, problems and, further, that the balance between areas of research be established only after careful, informed, and logical consideration of alternatives. Some aspects of the federal petroleum research program described during this review did not appear to be the result of such a balancing process.

The review panel unanimously recommends that any federal plan for marine petroleum pollution research, development, and monitoring be developed with continuing evaluation by non-government experts fully informed about current federal activities. Limits of time forced the present review to be based on agency-determined selections of such activities.

TOPIC REVIEWS

7. MARINE BIRDS, MAMMALS, TURTLES, AND ENDANGERED SPECIES

7.1 Rationale

Public interest at national and international levels for marine mammals, birds and endangered species has resulted in legal mandates for protection, conservation, and mitigation of impacts to these organisms. Political and legal concerns have induced large allocations of funds for determination of the potential harm in prospective OCS lease areas. The lack of information concerning distribution and abundance of these animals in frontier areas has spurred the development of short-term surveys of organism distribution. While these surveys meet preliminary management needs, by delimiting use of an area by a particular species, they do not satisfy the need for basic biological studies. Studies focusing on ecosystem function are necessary for understanding and predicting the impacts of petroleum-related pollution. Only when this information is available can long-term management decisions balance the costs and benefits of exploiting and protecting the environment.

7.2 Research

7.2.1 Population Assessments

Airplanes and ships of opportunity, while suitable platforms for gathering preliminary distribution and abundance data, tend to be unreliable and of limited use in population assessment. Differing in environmental conditions, observers, platforms, and organism behavior can cause great variability in the number of organisms observed and counted. Other limitations of aerial surveys include inadequate sampling, inability to assess importance of habitat to various species, and inability to assess significance of the locations of individuals at any one time. Caution should, therefore, be exercised in assessing the value of aerial reconnaissance surveys to obtain census figures.

7.2.2 Life History Studies

The basic biology of many marine birds, whales and turtles is known only superficially. To correct this deficiency, agencies with responsibility for endangered species (e.g., the FWS and NMFS) should be adequately funded to undertake basic biological studies. BLM has, in the past, funded good basic biology research apparently because other agencies have failed to carry out their responsibilities.

While studies of distribution, relative abundance, morphology, physiology and histology can be carried out relatively rapidly, studies to answer questions about the impact of pollution on food resources, feeding behavior, movement patterns, reproductive rates, mortality, breeding biology and population size are not easily or quickly done. To make informed management decisions, however, the importance of interconnections between organisms and ecosystem functioning must be understood.

In general, studies that use surface platforms in areas where birds, mammals, and endangered species are concentrated will be more effective at providing needed basic information than will studies that only gather information as to distribution of these organisms. Long-term studies in limited areas will be more useful than many short-term studies in providing this fundamental biological information.

7.2.3 Effects Studies

Birds, marine mammals and turtles may be killed by direct oiling; even small amounts of oil are known to affect survival and reproduction. Evidence suggests that some birds, marine mammals and turtles are attracted to oil spills and natural oil seeps, presumably to feed on prey species in the area. Field studies could quantify these interactions, but such studies have not been conducted. While both field and laboratory studies are apparently being conducted to determine the sublethal impacts of oil and dispersants on birds, marine mammals and turtles, they were not presented or were cursorally [sic] presented to the panel, thus their adequacy cannot be evaluated. Coordination between agencies during spills and at natural seeps would enhance the information gathering capability.

Despite the general need for studies of pollutant effects, prudence should be used in developing and allocating money to studies of unknown significance. For example, it has been suggested that a major study to document noise levels from oil and gas development be undertaken. Since most birds and mammals become habituated to sudden or continuous noise, a preliminary small-scale study should be done to determine if there is any problem before any large-scale acoustical perturbations studies are conducted.

7.3 Deficiencies

7.3.1 Endangered Species Studies

The Endangered Species Act of 1976, Section 7, mandates that an agency considering any action that may adversely affect an endangered species must consult with agencies charged with protection of these organisms to determine what studies or mitigation measures are appropriate. The National Marine Fisheries Service (NMFS), for example, can mandate, design and execute studies that they determine are "necessary" to protect various endangered species. In the case of marine mammals, to meet legal requirements, BLM has transferred millions of dollars to the National Marine Fisheries Service to conduct surveys that NMFS itself determined to be required.

The performance of studies by agencies which are themselves the Section 7 regulators and which consequently mandate these studies raises serious questions of conflict of interest.

7.3.2 Principal Investigators for Marine Mammal Research

The need for marine mammal information currently exceeds the ability of qualified investigators to provide information. Federal support for whale research has increased so rapidly that many investigators with no previous experience or training with whales have been supported. These funds, if allocated at lower levels over a longer time, could provide greater opportunities for attracting well-qualified scientists to the field, resulting in more and better information in the long term.

7.3.3 Tagging Technology

Protecting birds, marine mammals and turtles which migrate over long distances from ocean pollution requires knowledge of the migration patterns and life history of the species. BLM has spent and is spending considerable amounts of money developing tagging techniques with only moderate success. At least three tagging efforts are currently ongoing. It is felt that these funds spent over a longer period of time could more effectively be used to develop the appropriate technology, test techniques, and then begin tagging efforts.

7.4 Recommendations

A number of agencies have responsibility for endangered species, marine mammals, and birds. Apparently, little direction is given by these agencies as to just what information is required to evaluate the threat to endangered species in the lease area. As a result, many of the current studies are poorly focused, and as a whole, are not well coordinated with one another on either national or regional levels. Such coordination would result if the agencies supporting such studies were in better communication. The panel recommends:

1. Agencies with responsibility for endangered species such as the Fish and Wildlife Service and the National Marine Fisheries Service should undertake basic biological studies.
2. Studies concerning marine birds, mammals and endangered species should be redirected to study community structure, ecosystem functioning and natural history. These studies, by necessity, will be long-term, and should be interdisciplinary, and address the importance of interconnections between organisms and the environment. Knowledge must be acquired to determine how the ecosystem responds to various physical and biological perturbations.
3. Plans for integrating Section 7 consultations, study definition and design, and study performance should be developed so as to reduce the potential or suggestion of conflict of interest by regulatory agencies.
4. Generally expensive aerial surveys should not be used with [out] caution for anything other than a preliminary assessment of the general distribution and relative abundance of a species.
5. Marine birds forage over variable areas and can serve as biological integrators and concentrators of pollutants within their foraging areas. This aspect of bird biology can be used to detect and map environmental perturbations that would not be observable by direct measurement. The opportunity to use this natural phenomenon in assessing marine petroleum pollution impacts should be incorporated into federal programs for pollution assessment.

AGENCY REVIEWS

1. The National Science Foundation

The NSF/IDOE program has been active in research on pollutants since about 1970. The initial chemical analytical program turned, in 1972, into a larger program utilizing numerous biological approaches to determine the fate and effects of pollutants. The Controlled Ecosystem Pollution Experiment (a field program) initiated in British Columbia, was coordinated with a parallel Biological Effects program involving primarily laboratory research. In 1976, NSF reorganized the entire pollutant program to form PRIMA to investigate basic responses of a few organisms to a range of chemical toxicants. Over the last decade, the IDOE studies have been quite productive in producing analysis of the responses of different marine organisms to a wide range of pollutants. The laboratory studies conducted both in the early biological effects program and the present PRIMA program increased the understanding of

how organisms are impacted by pollutants and what mechanisms are involved in this toxic response. The CEPEX program while criticized by some, has provided important information on the responses of phytoplankton and zooplankton in meso scale studies, using very large bags in the natural environment. As with other NSF studies, there were no stringent contracting controls or reporting procedures involved in these programs. The primary output of the program has been publications in peer-reviewed journals.

2. Environmental Protection Agency

Two different types of studies were presented to the Evaluation Panel regarding EPA funded programs. The first included drilling fluids studies which have been reviewed in Section II of this report. The strengths of the program may be found in the number of well-qualified investigators contracted to do phases of the work on drilling fluids. This, however, is overshadowed by the use of extremely high and unrealistic levels of drilling fluids in many of the present studies. Drilling fluids dispersion information available from both industry and some federal research programs, is not being utilized in the design of these toxicity tests. Another factor contributing to the problems in these studies is the difficulty in standardizing a drilling fluid or attempts to provide a "standard" drilling fluid may not be realistic. A more productive method of conducting these studies would be to conduct field experiments during the actual drilling operation to test for the effects of organisms at different distances and depths around the platform.

The other programs funded by EPA at the present time were previously funded through the Department of Energy. These programs involved long-term studies on the fate and effects of oil in both an oil seep area and in the northwestern coastal zone of the United States. The importance of examining the situation in a natural oil seep where a consistent level of exposure to marine organisms is provided cannot be over emphasized. Also valuable are studies incorporating field experiments and laboratory tests, which examine the impacts of oiled substrate and chronic exposures on organisms under realistic conditions.

It appears to the Panel that the most significant and longest term impacts of oil are likely to be related to sediments, since there is a relatively short period of exposure in the water column. Both of the oil programs sponsored by EPA are studying these long-term effects and have produced a number of peer-reviewed publications on the subject.

3. NOAA/OCSEAP

The Alaskan program funded by BLM and conducted under the auspices of NOAA is providing valuable information in a number of fields. The management of the very large program appears to be adequate, and in keeping with the magnitude of the program needs. While it is impossible to review all of the aspects of these extensive studies, the Panel feels that the summaries given by management personnel indicate that the program is producing the type of information needed to evaluate the potential impacts of development in the Alaskan lease areas. In the transfer of funds for this research from BLM to NOAA rather major changes in the contracting requirements of principal investigators were observed. In the OCSEAP program, RFPs generally contain much less specific information and requirements, thus allowing the investigator to use initiative and imagination in designing appropriate methodologies. In

addition, information regarding the general level of funding available is given by OCSEAP. It is also important to note that principal investigators are allowed to discuss the program beforehand at workshops and develop approaches and questions needed to be answered. Later in the program, funding is provided for synthesis meetings to bring investigators together to respond specifically to management needs. All of these mechanisms are extremely important and funds for them are provided in the OCSEAP program. In some cases, excessive research dollars appear to go into data management instead of research. Reporting requirements and data base management should be streamlined and reduced.

4. Bureau of Land Management

The BLM program is extremely large. It is characterized by very stringent contracting regulations and reporting deadlines and a shortage of high level scientists within the Washington and/or regional offices. An important problem is the apparent need of the program to respond to emergencies, such as litigation or potential litigation regarding endangered species, whales and other regional problems perceived during the potential lease sale. This factor, plus the present studies' priority ranking criteria, do not allow principal investigators to conduct long-term comprehensive studies on biological systems which would be most useful in determining the potential impacts of pollutants. Suggestions as to possible remedies for this situation have been made elsewhere in this document, but will be reemphasized here.

First, in the design of studies it is important to have criteria that will allow high priority for long-term investigations, and suitable contracting mechanisms set up to provide for the funding of these studies. The very rigid contracting procedure utilized at present will simply not allow for continued long-term interdisciplinary research to understand how a marine ecosystem functions and, therefore, determine how pollutants might impact it.

Unlike OCSEAP, workshops and potential contractor meetings are not used to develop work statements on the most significant research questions, and needed approaches. From the time the work statement is written to the time of funding, only BLM personnel are allowed to have input. Since the basic level of funding is not included, and the contracting officer has the final approval power, contract award is often influenced by differential costs. Rigid restrictions are incorporated into the request for proposal, such that imagination and experience are of no benefit. Reporting requirements emphasize data and timing, not integration or interpretation of findings (milestones). Publications of information in peer-reviewed journals is neither encouraged nor funded.

The differences between the BLM and NOAA/OCSEAP programs are surprising since the funds derived from the same source. Additional funds provided OCSEAP for workshops and synthesis meetings, combined with no flexible contracting requirements and the extensive scientific staff at NOAA, have made a significant difference in the quality of the information produced by their programs.

5. The National Marine Fisheries Service

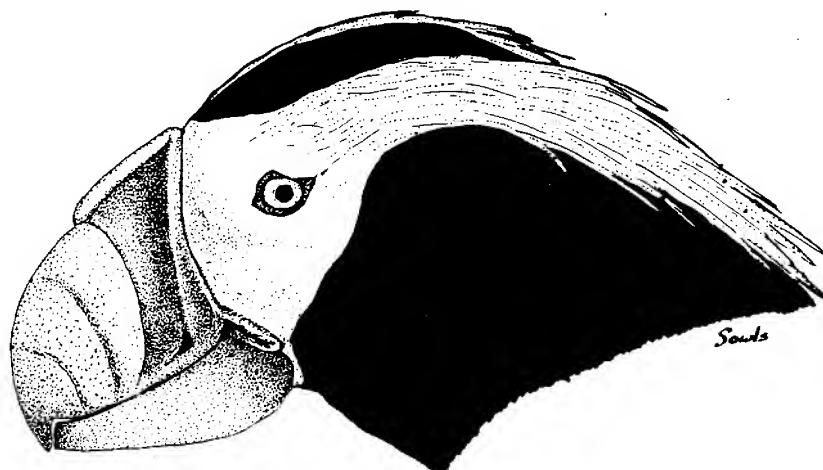
Various laboratories within NMFS have very different responsibilities relating to fate and effects of oil in the marine environment. Studies

within NMFS include effects of petroleum on endangered species, birds, coral reefs, fish, invertebrates and OCS monitoring. The Panel feels that the least practical of all of these efforts is the monitoring effort taking place in the northeastern United States (Ocean Pulse). There is no scientifically valid reason to believe that the methods used will ever detect the impacts of pollutants in OCS waters. The most pertinent research is being conducted in the northwestern U.S. (including Alaska) regarding the fate and effect of contaminants using state-of-the-art analytical chemistry and rational biological approaches. While we are not able to judge the scientific capabilities of the Gulf of Mexico laboratory, the proposed study on coral reef effects from drilling fluids does not inspire our confidence. The fact that a large multiyear program was proposed to examine the effects on coral reef fishes and other organisms at the same time it was reported that drilling fluids do not reach the living portion of the reef, leads one to believe that there is an inherent weakness in the program planning.

Regarding endangered species, marine birds, and mammals, there is a need for NMFS to conduct basic biological studies, coordinated with FWS and others. These studies should be directed toward understanding ecosystem functions and organism interrelationships. Section 7 consultations should be reorganized to restrict conflicts of interest by regulatory agencies.

6. United States Geological Survey

Studies conducted by USGS seemed, in general, to be of high quality and certainly of high priority in regard to the evaluation of lease sales. USGS appears to be most capable of meeting the needed deadlines for decision making regarding lease sales. While there is some unevenness in the information produced in the different regions of the U.S., there do not seem to be any glaring omissions in the total program. The weakest study discussed by USGS seemed to be its oil spill risk analysis modeling program which did not seem very useful in predicting impacts on the coastal environment under the wide variety of conditions which might occur.

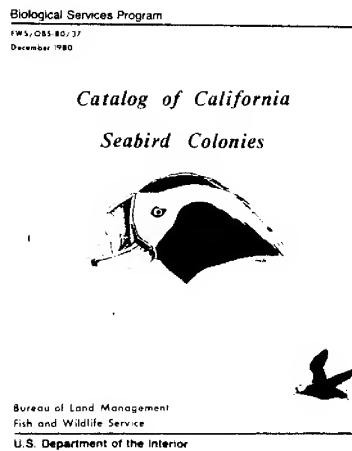


Tufted Puffin

NEW PUBLICATIONS

Catalog of California Seabird Colonies

A catalog of California seabird colonies has been published by the U.S. Fish and Wildlife Service. The catalog gives the size and species composition for more than 260 nesting areas, with a total estimated population of nearly 700,000. Species accounts which emphasize California populations are given for 17 species. Colonies which can be easily observed without disturbance and places where the original data are stored are identified in appendices.



The catalog (FWS/OBS 37/80) is available from Information Transfer Specialist, National Coastal Ecosystems Team, U.S. Fish and Wildlife Service, NASA Slidell Computer Complex, 1010 Gause Blvd., Slidell, LA 70458.

Other OBS Publications

Other recently published U.S. Fish and Wildlife Service Office of Biological Services publications are:

Publ. No.	Title
FWS/OBS-79/23	Ecological and physiological/toxicological effects of petroleum on aquatic birds
FWS/OBS-79/39	The ecology of intertidal flats of North Carolina: A community profile
FWS/OBS-79/44	Ecological characterization of the Sea Island coastal region of South Carolina and Georgia
FWS/OBS-80/01	Selected vertebrate endangered species of the seacoasts of the United States Species accounts include: Brown Pelican, Aleutian Canada Goose, Nene, Laysan Duck, Eskimo Curlew, and California Least Tern.

- FWS/OBS-80/04 Observations of marine birds and mammals in the northern Chesapeake Bight
- FWS/OBS-80/07 Impacts of navigational dredging on fish and wildlife: A literature review
- FWS/OBS-80/15 Tidal marshes: The boundary between land and ocean (a short pamphlet for a general audience)
- FWS/OBS-80/16 The effects of low levels of oil on aquatic birds
- FWS/OBS-80/30 Proceeding of the Gulf of Mexico coastal ecosystems workshop
- FWS/OBS-80/39 Coastal and marine bird data base

All documents are available from Information Transfer Specialist, U.S. Fish and Wildlife Service, Slidell Computer Complex, 1010 Gause Blvd., Slidell, LA 70458.

New Mexican Journal

"Centzontle" is a new journal published by the Sociedad Mexicana de Ornitoloxia, replacing the former bulletin of the same name, for the publication of ornithological research and notices. An article on the biology and management problems of a Brown Pelican colony on Isla Grande de Ixtapa appears in the first issue published early this year. Subscription rates are \$40.00 (six issues per year). The society's address is: Apartado Postal 70-581. Mexico 20, D.E. Mexico.

BULLETIN BOARD

Seabird Notecards

The seabird drawings by Mark Rauzon appearing in this issue are available on a set of notecards. A set of 12 cards (6 designs) with envelopes is available for \$5.50 from Mark J. Rauzon, Marine Endeavors, 46-024 Puulena St., #614, Kaneohe, HI 96744.

NEW MEMBERS

John Engbring Dept. Fisheries & Wildlife P.O. Box 50167 Honolulu, HI 96850	Wildlife Biologist Studies: Seabird surveys in Palau and Micronesia Interests: Survey methodology
Tom Harrington Dept. Biology California St. Univ. Long Beach, CA 90840	Student Interests: Penguins, Charadriiformes distribution, migration, ecology
J. Mark Jenkins Dept. Engineering Research Pacific Gas and Electric Co. 3400 Crow Canyon Rd. San Ramon, CA 94583	Wildlife Biologist Studies: Guam shorebirds, nesting studies of Common Noddy Interests: Nesting colonies
Cameron B. Kepler 248 Kaweo Pl. Kula, HI 96790	Biologist Studies: Ecology and behavior of Masked Booby; seabird distribution, West Indies and Central Pacific Interests: Breeding biology, ecology, distribution
Gerald M. Ludwig U.S. Fish and Wildlife Service Ala Moana Blvd. Honolulu, HI 96850	Refuge Manager Studies: Nearshore interactions among 300 fish and seabirds Interests: Pacific island seabirds
John Piatt Dept. Biology Memorial Univ. Newfoundland St. John's, NF, A1B 3X9	Graduate Student Studies: mortality of alcids, automatic censusing techniques Interests: Colony ecology, pelagic distribution

Mark J. Rauzon U.S. Fish and Wildlife Service P.O. Box 50167 Honolulu, HI 96850	Marine Biologist/Artist Studies: Biology of Blue-gray Noddy, surveys of Hawaiian and Alaskan seabirds Interests: Ecology and energetics, tropical and Antarctic seabirds
Olav J. Runde Dept. Zoology Stavanger Museum N-4000 Stavanger, Norway	Museum curator Studies: Breeding success of Black-legged Kittiwake Interests: Ecology of seabirds
Ralph S. Saito 7238 Opaekaa St. Honolulu, HI 96825	Wildlife Biologist Studies: Population monitoring, surveys and feeding ecology of seabirds Interests: Seabird-fisheries interactions
Fred C. Schaffner Dept. Zoology San Diego St. Univ. San Diego, CA 92181	Graduate Student Studies: Reproductive ecology of Elegant Tern Interests: Ecology, systematics, and behavior of colonial seabirds, management of predators
John L. Sincock RR 1, Box 197 Koloa, Kauai, HI 96756	Wildlife Biologist Studies: Management of shearwaters, life history, and diseases of Procellariiformes Interests: Management, development, feeding studies
Leighton Taylor Waikiki Aquarium 2777 Kalakaua Ave. Honolulu, HI 96815	Aquarium director Studies: Diets of sharks Interests: Use of seabirds in locating fish schools

Evelyn H. Weinstein
Manomet Bird Observatory
P.O. Box 936
Manomet, MA 02345

Education coordinator
Studies: Colony formation in the Gulf of Maine
Interests: Management and conservation of seabirds, public education

Gary J. Wiles
P.O. Box 23367 GMF
Guam, M.I. 96921

Wildlife Biologist
Interests: Seabird watching

Sartor O. Williams, III
219 N. Grant Ave.
Ft. Collins, CO 80521

Wildlife Biologist
Studies: Waterbirds of the Mexican Plateau
Interests: Distribution, population status, movement, and ecology of Mexican waterbirds



White-tailed Tropicbird

DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC
SEABIRDS AND THEIR ENVIRONMENT

THE EXECUTIVE COUNCIL 1981

Officers

Chairman Kees Vermeer, Canadian Wildlife Service, P.O. Box 340,
 Delta, B.C. V4K 3Y3

Vice Chairman Harry Ohlendorf, U.S. Fish and Wildlife Service,
 c/o Div. Wildlife and Fisheries Biology, University of
 California, Davis, CA 95616

Secretary Judith L. Hand, 1647 Michael Lane,
 Pacific Palisades, CA 90272

Treasurer Betty Anne Schreiber, Los Angeles County Museum,
 900 Exposition Blvd., Los Angeles, CA 90007

Editor Joseph G. Strauch, Jr., Science Applications, Inc.,
 2760 29th St., Boulder, CO 80301

Regional Representatives

Alaska Margaret Petersen, U.S. Fish and Wildlife Service,
 1011 E. Tudor Rd., Anchorage, AK 99503

British Columbia Ian Robertson, Beak Environmental Specialists,
 1550 Alberni St., Vancouver, B.C. V6G 1A5

Hawaii Craig Harrison, U.S. Fish and Wildlife Service,
 Box 50167, Honolulu, HI 96850

Mexico Monica Herzig-Zurcher, Bell Museum of Natural History,
 10 Church St. SE, Minneapolis, MN 55455

Northern California Robert Boekelheide, Pt. Reyes Bird Observatory,
 4990 Shoreline Hwy., Stinson Beach, CA 94070

Oregon Mark A. Strong, U.S. Fish and Wildlife Service,
 Suite 1692, 500 N.E. Multnomah St., Portland, OR 97232

Southern California John C. Ogden, Condor Research Center
 2284 S. Victoria Ave., Ventura, CA 93003

Washington Dee Boersma, Institute for Environmental Studies,
 University of Washington, Seattle, WA 98195

Non-regional Representatives

William H. Drury, College of the Atlantic,
Bar Harbor, ME 04609

Spencer G. Sealy, Department of Zoology
University of Manitoba, Winnipeg, Man. R3T 2N2

Douglas Siegel-Causey, Department of Ecology
University of Arizona, Tucson, AZ 85721